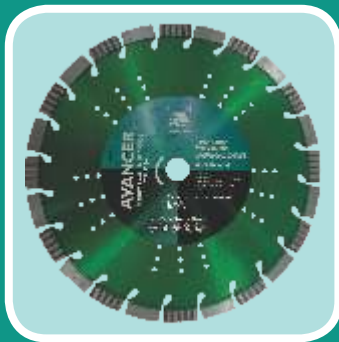




“we saw differently”



Construction Catalogue

INDEX

Avancer MUS/T Predator Blades	2
Avancer MM50 Multi-Material Blades	3
Avancer Wall Sawing, Pre-Pressed Concrete and Core Sampling Blades	4
Avancer SC 1500 Series	5
Avancer ESC 1500 Series	6
Avancer LWE 1200 Series	7
Avancer ELWE 1000 Series	8
Avancer Dry Cutting Range	9
Avancer Red Devil, Euro-cut and Euro-cut Eco Range	10
Avancer CR Con Rim Pro and Cecrops	11
Avancer WCD30 Core Drills	12
Avancer Core Accessories	13
Avancer Floor Grinding and Polishing	14
Avancer Concrete Polishing	15
Avancer Kwik-Kut S974A Pivot Head Masonry Saw	16
Avancer Kwik-Kut HD66S Pivot Head Masonry Saw	17
Avancer Kwik-Kut FH711 Fixed Head Saw	18
Avancer Elite 80 Masonry Saw	19
Avancer Expert Mixer	20
Universal Mixer	21
Avancer Diamond Blade Information & Troubleshooting Guide	22
.....	23

“we saw differently”



Diamond Tools

Avancer MUS/T Predator Blades



AVANCER MUT5 PREDATOR TURBO BLADES

AVAILABLE SIZES:

115mm, 230mm, 300mm and 350mm

APPLICATIONS:

FOR WET OR DRY CUTTING ON ALL TUBULAR STEELS, FLAT AND ROUND BARS, VERY HARD REFRACTORIES AND HEAVILY REINFORCED CONCRETES.



AVANCER MUS5 PREDATOR SEGMENTED BLADES

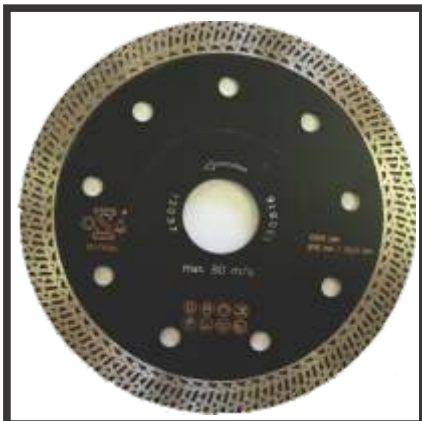
AVAILABLE SIZES:

230mm, 350mm, 400mm , 450mm and 500mm

FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

LONG LIFE, WET OR DRY CUTTING ON ALL TUBULAR STEELS, FLAT AND ROUND BARS, VERY HARD REFRACTORIES AND HEAVILY REINFORCED CONCRETES.



AVANCER VTP ULTRA THIN TURBO BLADES

AVAILABLE SIZES:

115mm, 125mm, 180mm, 230mm AND 250mm

APPLICATIONS:

WET OR DRY CUTTING OF CERAMICS, PORCELAIN, MARBLE, GRANITES AND ANY HARD TO CUT MATERIALS.

“we saw differently”



Diamond Tools

MM50 Multi-Material Diamond Blade

SPECIALIST SERIES



The Specialist Series has been designed and developed to deliver unrivalled product performance for the lowest cost per cut. It features ultimate diamond quality and bond formulation with the widest span of application.

MM50 Multi-Material

- For all hard, medium and Abrasive Concretes
- All Asphalts and Green Concretes
- All of these applications in one blade

Key Features:

- Cuts Everything
- 12mm / 15mm Segments
- Dry & Wet Cutting

**350mm & 230mm
only**



Dry Cutting



Wet Cutting



Double Laser Welded



Asphalt



Hard Materials



Abrasive



Multi Materials

Conforms to EN13236

“we saw differently”



Diamond Tools

Avancer Specialist Blades



AVANCER WS430 WALL SAW BLADES

AVAILABLE SIZES:

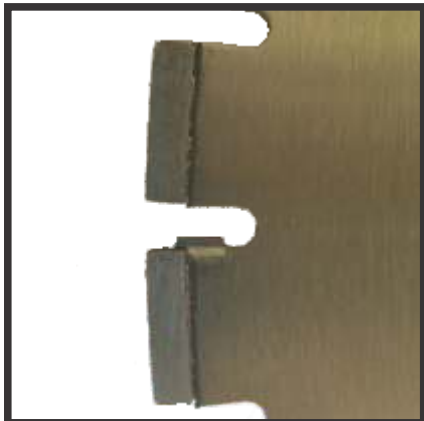
600mm UP TO 1500mm WITH UNIQUE V SEGMENTS
FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

FOR WALL SAWING OF ALL REINFORCED CONCRETES

MATRIX

AUTO ARRAY SYSTEM



AVANCER PSF50 PRE-STRESSED CONCRETE BLADES

AVAILABLE SIZES:

450mm, 500mm, 600mm AND 900mm
FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF ALL PRESTRESSED CONCRETE
PRODUCTS, HOLLOW CORE FLOORING AND LINTELS



AVANCER CS10/30 CORE SAMPLING BLADES

AVAILABLE SIZES:

350mm AND 230mm
FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

FOR WET CUTTING OF ALL QUARTZ, SHALE AND IRON ORE
GEOLOGICAL CORE SAMPLES IN THE EXPLORATION AND MINING
INDUSTRIES AS WELL AS IN THE GEOLOGICAL LABORATORIES

MATRIX

AUTO ARRAY SYSTEM

“we saw differently”



Diamond Tools

Avancer SC 1500 Series



AVANCER SC80 ASPHALT

AVAILABLE SIZES:

350mm UP TO 600mm

FITTED WITH 15mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF ALL ASPHALT, PRE-MIX AND VERY ABRASIVE MATERIALS, BREEZE BLOCKS ETC.



AVANCER SC40 GREEN CONCRETE

AVAILABLE SIZES:

350mm UP TO 600mm

FITTED WITH 15mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF GREEN CONCRETE AND ALL ABRASIVE MATERIALS.



AVANCER SC10 OLD CONCRETE

AVAILABLE SIZES:

300mm UP TO 600mm

FITTED WITH 15mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF OLD CONCRETE, REINFORCED CONCRETE, REFRACTORIES AND GENERAL MASONRY

“we saw differently”



Diamond Tools

Avancer ESC 1500 Series



AVANCER ESC80 ASPHALT

AVAILABLE SIZES:

350mm ONLY

FITTED WITH 15mm HIGH SEGMENTS

APPLICATIONS:

HIGH PERFORMANCE SAWING OF ALL ASPHALT AND ABRASIVE MATERIALS



AVANCER ESC40 GREEN CONCRETE

AVAILABLE SIZES:

350mm ONLY

FITTED WITH 15mm HIGH SEGMENTS

APPLICATIONS:

HIGH PERFORMANCE SAWING OF ALL GREEN CONCRETE AND ABRASIVE MATERIALS



AVANCER ESC10 OLD CONCRETE

AVAILABLE SIZES:

350mm ONLY

FITTED WITH 15mm HIGH SEGMENTS

APPLICATIONS:

HIGH PERFORMANCE SAWING OF VERY HARD CONCRETE, REINFORCED CONCRETE, KERBS, LINTELS ETC.

“we saw differently”



Diamond Tools

Avancer LWE 1200 Series



AVANCER LWE80 ASPHALT

AVAILABLE SIZES:

300mm UP TO 600mm

FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF ALL ASPHALT, PRE-MIX AND VERY ABRASIVE MATERIALS.



AVANCER LWE40 GREEN CONCRETE

AVAILABLE SIZES:

300mm UP TO 600mm

FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF GREEN CONCRETE AND ALL ABRASIVE MATERIALS.



AVANCER LWE10 OLD CONCRETE

AVAILABLE SIZES:

300mm UP TO 900mm

FITTED WITH 12mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF OLD CONCRETE, REINFORCED CONCRETE, REFRACTORIES AND GENERAL MASONRY

“we saw differently”



Diamond Tools

Avancer ELWE 1000 Series



AVANCER ELWE80 ASPHALT

AVAILABLE SIZES:

350mm ONLY

FITTED WITH 10mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF ALL ASPHALT, PRE-MIX AND VERY ABRASIVE MATERIALS.



AVANCER ELWE40 GREEN CONCRETE

AVAILABLE SIZES:

350mm ONLY

FITTED WITH 10mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF GREEN CONCRETE AND ALL ABRASIVE MATERIALS.



AVANCER ELWE10 OLD CONCRETE

AVAILABLE SIZES:

350mm ONLY

FITTED WITH 10mm LASER-WELDED SEGMENTS

APPLICATIONS:

WET CUTTING OF OLD CONCRETE, REINFORCED CONCRETE, REFRACTORIES AND GENERAL MASONRY

“we saw differently”



Diamond Tools

Avancer Dry Cutting Range



AVANCER RA30 230mm SEGMENTED SILVER

AVAILABLE SIZES:

115mm, 125mm, 180mm AND 230mm

APPLICATIONS:

DRY CUTTING OF GENERAL MASONRY PRODUCTS AND CONCRETE



AVANCER RA40 230mm SEGMENTED GREEN

AVAILABLE SIZES:

230mm ONLY

APPLICATIONS:

DRY CUTTING OF ABRASIVE MATERIALS, GREEN CONCRETE ETC.



AVANCER TA30 230mm TURBO

AVAILABLE SIZES:

115mm, 125mm, 150mm, 180mm AND 230mm

APPLICATIONS:

CHIP FREE CUTTING OF MARBLE, GRANITE, TERRAZZO AND CERAMIC TILES.

“we saw differently”

Avancer Red Devil Range



RED DEVIL SRD DIAMOND SAW BLADES

AVAILABLE SIZES:

115mm AND 230mm TURBO, CON RIM AND SEGMENTED

APPLICATIONS:

DRY CUTTING OF GENERAL MASONRY PRODUCTS.

Avancer Euro-Cut Range



EURO - CUT ECM DIAMOND SAW BLADES

AVAILABLE SIZES:

115mm AND 230mm TURBO, CON RIM AND SEGMENTED

APPLICATIONS:

DRY CUTTING OF GENERAL MASONRY PRODUCTS.

Avancer Euro-Cut Range - Eco



EURO - CUT ECM DIAMOND SAW BLADES

AVAILABLE SIZES:

230mm TURBO, CON RIM AND SEGMENTED

APPLICATIONS:

DRY CUTTING OF GENERAL MASONRY PRODUCTS.

“we saw differently”

Avancer CR Continuous Rim Blades



AVANCER CR20 CON RIM DIAMOND BLADES

AVAILABLE SIZES:

115mm, 125mm, 180mm, 200mm, 230mm, 250mm, 300mm, 350mm

APPLICATIONS:

WET CUTTING OF PORCELAIN TILES, CERAMIC TILES, TERRAZZO, GRANITE AND MARBLE



AVANCER CR10 PREMIUM CON RIM BLADES

AVAILABLE SIZES:

250mm, 300mm AND 350mm

APPLICATIONS:

WET CUTTING OF HIGH ALUMINA WEAR RESISTANT TILES, GLASS, GEMSTONES ETC.



AVANCER SRD CECROPS DISCS

AVAILABLE SIZES:

115mm AND 178mm FROM 16# TO 120#

APPLICATIONS:

MARBLE, GRANITE, TERRAZZO, CONCRETE, CHINA CLAY, ENAMELS, FIBER GLASS BODIES, CAST IRON AND CLEANING OF SHIPS HULLS.

“we saw differently”



Diamond Tools

Avancer WCD30 Core Drills



WCD30 WET CORING BARRELS

AVAILABLE SIZES:

12mm TO 250mm

- TURBO SEGMENTS FOR SPEED
- LASER-WELDED FOR STRENGTH

APPLICATIONS:

WET DRILLING OF HEAVILY REINFORCED CONCRETES,
CONCRETES AND MASONRY



DCD30 DRY CORE BITS

AVAILABLE SIZES:

38mm TO 178mm.

- TURBO SEGMENTS FOR SPEED
- LASER-WELDED FOR STRENGTH

APPLICATIONS:

DRY CORING OF GENERAL MASONRY PRODUCTS
Not for REINFORCED CONCRETE.
Do not use HAMMER ACTION



AVANCER GCB30 GRANITE CORES

AVAILABLE SIZES:

20mm - 102mm x 60mm LONG

APPLICATIONS:

WET DRILLING OF ALL GRANITE MATERIALS

“we saw differently”



Diamond Tools

Avancer Core Accessories



ACCESSORIES

SDS PLUS AND 13mm HEX ADAPTORS STD
SDS PLUS AND 13mm HEX ADAPTORS 250mm
PILOT DRILLS DRIFTS
WCD30 WET CORING SEGMENTS
DCD30 DRY CORING SEGMENTS
SDS MAX ADAPTORS ARRIVING SOON!!



AVANCER CORE DRILLING EXTENSION

AVAILABLE SIZES:

150mm 1 1/4" BOX - PIN, 300mm
150mm 1/2" R BOX - PIN, 300mm 1/2" R BOX - PIN
1 1/4" BOX - PIN,

APPLICATIONS:

USED IN ALL CORE DRILLING APPLICATIONS WHERE YOU
NEED TO GO DEEPER THAN THE STANDARD 450mm CORE
BARREL LENGTH



AVANCER CORE DRILL ADAPTORS

AVAILABLE SIZES:

1 1/4" UNC WITH 1/2" INTERNAL THREAD

APPLICATIONS:

THESE ADAPTORS ARE USED TO CONVERT ANY CORE
BARRELS OR MACHINES TO TAKE EITHER 1 1/4" UNC
THREAD OR THE 1/2" THREAD

“we saw differently”

Avancer Floor Grinding / Polishing



AVANCER FGP80 ROTARY GRINDING HEAD

AVAILABLE SIZES:

250mm ONLY

FITTED WITH 20 SEGMENTS - 40 x 10 x 10

APPLICATIONS:

REMOVES HIGH SPOTS. FEATHERS UNEVEN SURFACES.

BLENDS PATCHES AND SMOOTH FLOORS TO ACCEPT TILES etc.

GREEN: HARD BOND FOR SOFTER ABRASIVE FLOORS

ORANGE: MEDIUM BOND FOR MEDIUM HARD FLOORS

RED: SOFT BOND FOR HARD FLOORS AND BIG AGGREGATES



AVANCER DW80 DIAMOND WEDGES

AVAILABLE SIZES:

3 WEDGES

FITTED WITH 4 SEGMENTS EACH - 40 x 10 x 10

APPLICATIONS:

REMOVAL OF HIGH SPOTS, FEATHERS UNEVEN SURFACES,

BLENDS PATCHES AND SMOOTHS FLOORS TO ACCEPT TILES etc.

GREEN: HARD BOND FOR SOFTER FLOORS AND SCREEDS

ORANGE: MEDIUM BOND FOR MEDIUM HARD FLOORS

RED: SOFT BOND FOR HARD FLOORS AND BIG AGGREGATES



CARBO WEDGES

APPLICATIONS:

REMOVAL OF HIGH SPOTS, FEATHERS UNEVEN SURFACES,

BLENDS PATCHES AND SMOOTHS FLOORS TO ACCEPT TILES etc

3 CARBORUNDUM WEDGES PER SET

“we saw differently”



Diamond Tools

Avancer Concrete Polishing



AVANCER POLISHING PADS

GRIT SIZES AVAILABLE:

50, 100, 200, 400, 800, 1500, 3000 AND BUFF

APPLICATIONS:

POLISHING ON ALL STRAIGHT AND CURVED EDGES OF MARBLE, CONCRETE AND GRANITE MATERIALS.



CALCINED ALUMINA POLISHING POWDER

AVAILABLE SIZES:

5, 10 OR 20KG BAGS

APPLICATIONS:

FINAL FINISHING OF ALL GRANITE, CONCRETE AND MARBLE SURFACES



AVANCER CUP GRINDERS

AVAILABLE SIZES:

100mm, 125mm AND 180mm WITH M14 OR $\frac{5}{8}$ THREAD IN TURBO, SINGLE ROW AND DOUBLE ROW

APPLICATIONS:

WET OR DRY GRINDING OF ALL GRANITE, CONCRETE AND REFRACTORY MATERIALS

“we saw differently”



Kwik~Kut

S974A Ø350mm Pivot Head Masonry Saw



A heavy duty saw ideal for construction sites, geological core cutting and tile cutting.

Specifications

Models:	S974A E220	S974A E380	S974A Petrol
Type Frame) Electric	90-L 2	90-L 2	
Engine Model			Honda GX160
Voltage V	230	380	
Power Kw	2.2	2.2	3.3/3.6
HP			3.5
Phases	1	3	
Cycles Hz	50	50	
Motor rpm	2800	2800	3600
Electric Protect	IP 55	IP 55	
Blade Shaft rpm	2800	2800	3600
Max blade Ø diameter mm	350	350	350
Max depth of cut mm	100	100	100
Max length of cut mm	500	500	500
Arbor size mm	25,4	25,4	25,4
Number of belts	2	2	2
Wet dry cutting	Wet/Dry	Wet/Dry	Wet/Dry
Weight Kg	120	120	125
Dimensions(LxWxH) mm	950x530x1450	950x530x1450	950x530x1450
Made in South Africa Material: 4mm Mild Steel Plate with a 5 micron powder coated layer			

Features

Conveyor - With anti tilt smooth glide bearing assemblies.

Easy access to water pump - (Petrol version F/W mechanical water pump).

Pivot head blade cutting height adjustment - Crank and foot pedal.

Blade flange nut spanner - supply standard.

Robust heavy gauge frame assembly.

Standard local bearings.

Benfits

Safe and accurate cutting

Regular cleaning ensures long pump life.

Cutting Depth 115mm and upto 200mm depth by reversing material - Allows step cutting for hard materials.

Maintains nut integrity and loosening and correct tightening.

Maintains frame integrity with rough handling. Rigidity for accurate cutting.

Availability of spares throughout South Africa.

“we saw differently”



Kwik~Kut

HD66S Ø500mm Pivot Head Masonry Saw

A heavy duty saw developed for South Africa and ideal for steel manufacturers refractories, construction, reinforced concrete lintels and block cutting of all masonry materials.



Specifications

Models:	HDS66S E525	HD66S E380
Type (Frame) Electric	132 - S2	132 - S2
Engine Model		
Voltage V	525	380
Power Kw	7.5	5.5
HP		
Phases	3	3
Cycles Hz	50	50
Motor rpm	2900	2900
Electric Protect	IP 55	IP 55
Blade Shaft rpm	2900	2900
Max blade Ø diameter mm	500	500
Max depth of cut mm	165	165
Max length of cut mm	550	550
Arbor size mm	25,4	25,4
Number of belts	4	4
Wet dry cutting	Wet/Dry	Wet/Dry
Weight Kg	195	195
Dimensions(LxWxH) mm	1320X570X1560	1320X570X1560

Made in South Africa

Material: 4mm Mild Steel Plate with a 5 micron powder coated layer

Features

- Conveyor - With anti tilt smooth glide bearing assemblies.
- Easy access to water pump - (Petrol version F/W mechanical water pump).
- Pivot head blade cutting height adjustment - Crank and foot pedal.
- Blade flange nut spanner - supply standard.
- Robust heavy gauge frame assembly.
- Standard local bearings.

Benfits

- Safe and accurate cutting
- Regular cleaning ensures long pump life.
- Cutting Depth 115mm and upto 200mm depth by reversing material - Allows step cutting for hard materials.
- Maintains nut integrity and loosening and correct tightening.
- Maintains frame integrity with rough handling. Rigidity for accurate cutting.
- Availability of spares throughout South Africa.

“we saw differently”



Kwik~Kut

FH711 Ø350mm Fixed Head Saw

A heavy duty, portable (removable legs for transport), fixed head saw developed specifically for specialised geological core cutting



Specifications

Models:	FH711E 220	FH711E 380	FH711P Petrol
Type (Frame) Electric	90-L 2	90-L 2	
Engine Model			Honda GX160
Voltage V	230	380	
Power Kw	2.2	2.2	3.3/3.6
HP			3.5
Phases	1	3	
Cycles Hz	50	50	
Motor rpm	2800	2800	3600
Electric Protect	IP 55	IP 55	
Blade Shaft rpm	2800	2800	3600
Max blade Ø diameter mm	350	350	350
Max depth of cut mm	100	100	100
Max length of cut mm	500	500	500
Arbor size mm	25,4	25,4	25,4
Number of belts	2	2	2
Wet dry cutting	Wet/Dry	Wet/Dry	Wet/Dry
Weight Kg	125	125	130
Dimensions(LxWxH) mm	1200x600x1370 (*750)	1200x600x1370 (*750)	1200x600x1450 (*755)

Made in South Africa

Material: 4mm Mild Steel Plate with a 5 micron powder coated layer

** Legs collapsed for shipping and portability.*

Features

- Conveyor - With anti tilt smooth glide bearing assemblies.
- Easy access to water pump - (Petrol version F/W mechanical water pump).
- Pivot head blade cutting height adjustment - Crank and foot pedal.
- Blade flange nut spanner - supply standard.
- Robust heavy gauge frame assembly.
- Standard local bearings.

Benfits

- Safe and accurate cutting
- Regular cleaning ensures long pump life.
- Cutting Depth 115mm and upto 200mm depth by reversing material - Allows step cutting for hard materials.
- Maintains nut integrity and loosening and correct tightening.
- Maintains frame integrity with rough handling. Rigidity for accurate cutting.
- Availability of spares throughout South Africa.

“we saw differently”

ELITE 80



Art. 9000

Masonry saw ideal for the building sector suitable for straight and 45° angle cuts of bricks, stones, concrete-blocks, granite, marble and natural stones.

- Amperometrical protection
- Overheat protection with manual reset
- Adjustable cutting head
- Sliding working table
- Water recycling pump type S2
- 

Disk Ø 350 not included.

	800 mm
	435x435 mm
	110 mm
	130 mm
	80 mm
	350 mm / 25,4 mm
	13 A
	3Hp/2,2Kw, 9A
	2800
	80x120x97 cm
	3 pz
	80x120x226 cm








CONTROL BOARD

- switch with release coil;
- overheat protection with manual reset;
- LASER instrument for the maximum cutting precision (optional in standard version) and plug industrial type.



CARRIAGE

Working table with sliding carriage equipped with 6 adjustable nylon wheels and 12 ball-bearings to get a perfect precision, stability and sliding.



SPRAY SYSTEM

Patented system that improves the lubrication of diamond discs and ensures higher cutting performance and longer-lasting blades.



TILTING CUTTING HEAD

Tilting cutting head for one greater rapidity and precision in the execution of particular cuts. It can be locked at the wished height.

“we saw differently”

Expert Saw



DIAMOND DISK (not included)	ø500 mm (int ø25,4 mm)
ENGINE	400V 50Hz 5,5Hp/4kW
ROTATION SPEED	1400 rpm
AMPEROMETRICAL PROTECTION	10-16A
MAX CUTTING LENGTH	750 mm
MAX CUTTING DEPTH AT 90°	170 mm
MAX CUTTING DEPTH WITH 2 RUNS	235 mm
WORKING TABLE SIZE	520 x 443 mm
WATER RECYCLING PUMP TYPE	S3 standard
KIT WHEELS	Standard
LASER INSTRUMENT	Standard
DIMENSION MACHINE IN SERVICE	720x1950x h. 1478 mm
DIMENSION MACHINE IN STOCK	800x1200x h. 1030 mm
NET WEIGHT	85 Kg

Application: All types of refractories, masonry products, building materials, granites and marble products.



The cutting head and the arm are in die-casting aluminium to get the maximum of rigidity and lightness.
Quick reading indicator of the position for the cut in 2 RUNS.



The cutting head is tilting and can be locked at the intended height.



The cutting position with sliding carriage.

“we saw differently”

Mixer



MIXING CAPACITY	50 Kg
ENGINE	1,6Hp / 1,2kW
ROTATION SPEED	60 min ⁻¹
BUCKET CAPACITY	65 lt
DIMENSION MACHINE IN SERVICE	940x570x780 mm
DIMENSION MACHINE IN STOCK	600x630x640 mm
NET WEIGHT	24 Kg

Application: Universal mixer for tile adhesives, cement, paint, epoxy resins.



An automatic safety switch prevents the motor start when the mixing head is completely raised



The material must be poured on the black plastic protection



The machine is easy to move

“we saw differently”

AVANCER DIAMOND BLADE INFORMATION AND TROUBLESHOOTING GUIDE



INTRODUCTION

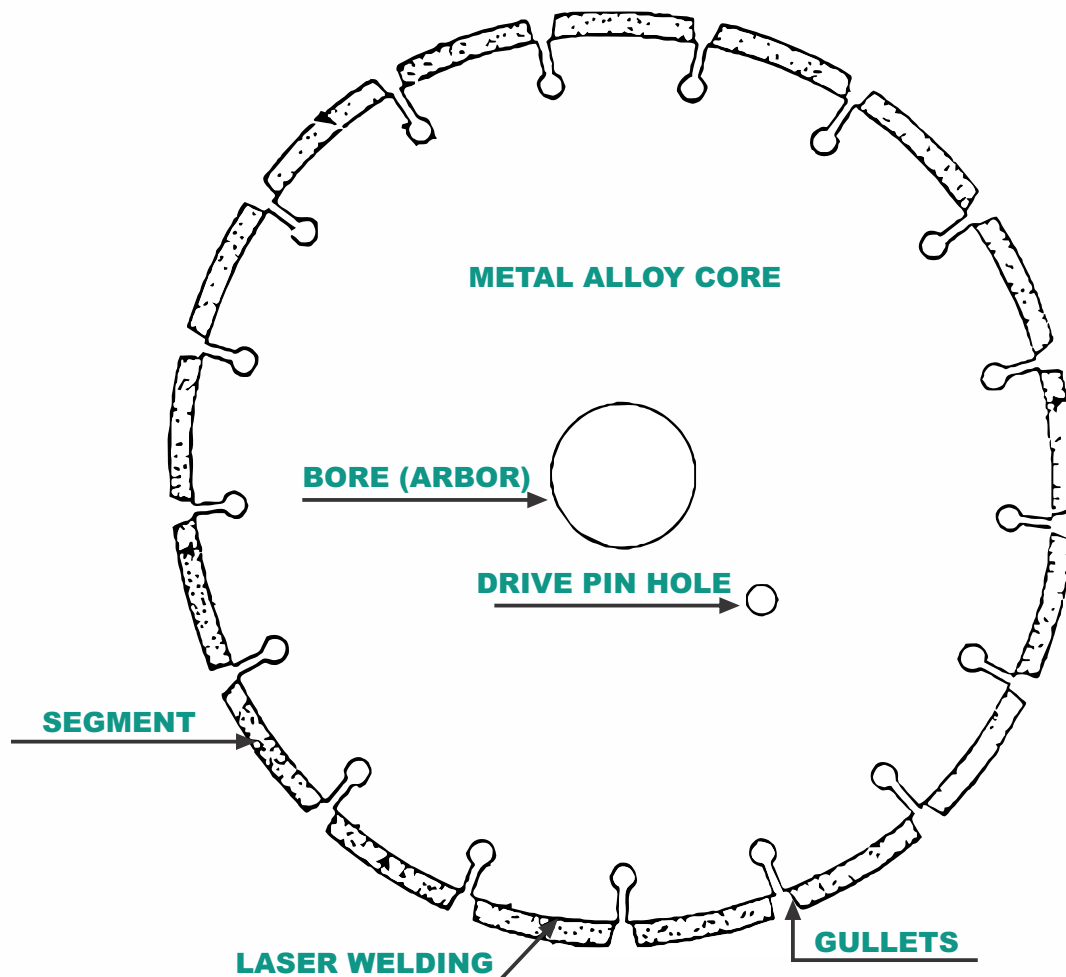
WHAT IS A DIAMOND SAW BLADE?

A diamond saw blade is a circular steel disc fitted with diamond bearing segments.

COMPONENTS OF A DIAMOND SAW BLADE

1. **Metall Alloy Core:** The core is a high-grade heat-treated tempered steel disc, which is precision ground to size. These cores are manufactured exclusively for diamond blade applications.
2. **Segment:** The diamond segments are made up of synthetic diamond grit, dispersed through a metal matrix, and also called the bond.
3. **Gullets:** Gullets serve to help cool the blade during sawing by allowing the water (wet cutting) or air (dry cutting) to flow through the edge of the blade. They also allow for some flexing and help reduce cracks at the blade edge.
4. **Drive Pin Hole:** Blades subjected to higher horsepower and torque exerted by some concrete saws requires a drive pin to prevent the blade from spinning on the shaft.
5. **Bore (Arbor):** All blades have centre holes (bores), sized according to the saw shaft that they will be used on. Centre holes are generally standardised.

INTRODUCTION



BLADE SELECTION

When selecting a diamond blade for a job, these questions are a basic guideline to assist you in choosing the most suitable blade for the task at hand.

- **What is the material?**
This is a very important factor when selecting a blade. It directly affects the performance and life of the blade.
- **What is the cutting method?**
Wet or dry cutting? Do not cut dry with blades recommended for wet cutting only.
- **How deep is the cut?**
The depth of the cut will assist you in determining the correct size blade for the job.
- **What is the spindle speed?**
This is to ensure that the blade is operated within the speed range for which it was tensioned. Failing to do this could result in the blade running out of true or "speed wobbling."

NB: Harder, less abrasive materials require slower spindle speeds.
Softer, more abrasive materials require faster spindle speeds.

BLADE CUTTING DEPTHS	
DIAMETER	CUTTING DEPTH
115mm	30mm
180mm	60mm
200mm	75mm
230mm	83mm
250mm	92mm
300mm	100mm
350mm	120mm
400mm	143mm
450mm	160mm
500mm	190mm
600mm	240mm
700mm	290mm
800mm	340mm
900mm	390mm

These cutting depths serve only as a guideline. The actual depth will depend on flange diameters and machine type.

For hand held saws it is not recommended to cut more than 20mm deep with blades up to 125mm diameter and no more than 30mm deep for blades up to 230mm diameter.



SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



DIAMOND BLADE OPERATING SPEEDS

DIAMETER	*OPERATING SPEED	**MAXIMUM SAFE SPEED
115mm	8,063 RPM	13,300 RPM
125mm	7,257 RPM	12,000 RPM
180mm	5,184 RPM	8,500 RPM
200mm	4,536 RPM	7,500 RPM
230mm	4,032 RPM	6,800 RPM
250mm	3,629 RPM	6,100 RPM
300mm	3,024 RPM	5,100 RPM
350mm	2,592 RPM	4,400 RPM
400mm	2,268 RPM	3,800 RPM
450mm	2,016 RPM	3,400 RPM
500mm	1,814 RPM	3,00 RPM
600mm	1,512 RPM	2,500 RPM
700mm	1,296 RPM	2,300 RPM
800mm	1,134 RPM	1,900 RPM
900mm	1,008 RPM	1,800 RPM

HS HIGH SPEED DIAMOND BLADES

* Based on 48 meters per second - the general optimum performance range for cutting concrete and masonry products is approx 10%. For hard dense materials such as stone & tile, the optimum performance speed is 10 - 25% less than the speed shown above. Blade shaft speeds (RPM's at no load) for most tools will be higher than the recommended operating speeds shown above. Under normal sawing conditions, the actual blade shaft speed of the tool will slow down under load, and should fall into the optimum speed range.

** The speed (RPM) represents the maximum safe speed (in revolutions per minute) at which each blade shaft (arbor) speed of the tool is within the maximum safe limit of that blade.

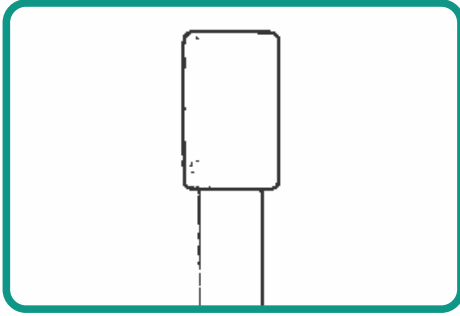


SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



TROUBLE SHOOTING

BLADE WILL NOT CUT



CAUSES

- Blade is too hard for material being cut.
- Blade has become dull as a result of being used on too hard material.
- Blade does not cut material it was specified for.

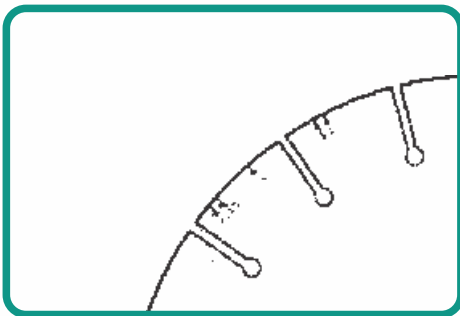
REMEDIES

Select proper blade specification for material being cut.

Sharpen by cutting on a lightweight building block to expose diamonds. If continual sharpening is required, the blade is too hard for the material.

Make sure blade is correct, if so, allow it to dress itself on the material to be cut. If it does not dress itself, sharpen as you would a dull blade.

CRACKS IN SEGMENT



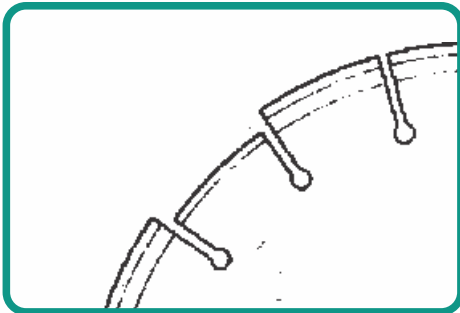
CAUSES

- Blade is too hard for material being cut.

REMEDIES

Use a blade with softer bond.

SEGMENT LOSS



CAUSES

- Material not firmly secured.
- Overheating due to lack of water.
- Steel centre is worn from undercutting.
- Defective blade collars are settling the blade out of alignment.
- Blade is too hard for material being cut.
- Blade is cutting out of round causing pounding motion.
- Improper blade tension.

REMEDIES

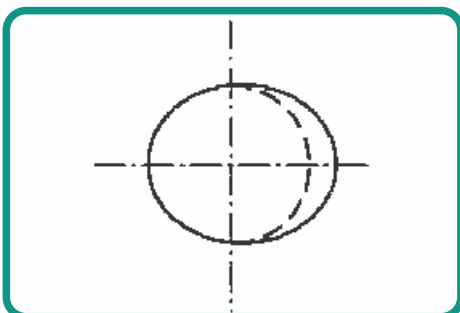
Hold material firmly against a backstop. Check water supply and check that the flow is adequate on both sides of blade. Use sufficient water to flush out the cut. Clean blade collars or replace if collars are under recommended diameter.

Use proper blade specification for material being cut.

Replace worn bearings, realign blade shaft or replace worn blade mounting arbor.

Give shaft speed of equipment when ordering blades. (Concrete saws: check spindle speed with tachometer to ensure blade is running at correct RPM and blade is tensioned for correct RPM)

ARBOR HOLE OUT OF ROUND CAUSES



- Blade collar is not properly tightened, permitting blade rotation or vibration on the shaft.
- Blade collars are worn or dirty, not allowing proper blade clamping.
- Blade is not properly mounted

REMEDIES

Tighten the shaft nut with a spanner to ensure that the blade is adequately secured.

Clean blade collars, making sure they are not worn. Tighten arbor nut properly.

Make certain the blade is mounted on the proper shaft diameter before tightening shaft nut. On concrete saws, make sure the pin hold slides over the drive pin.

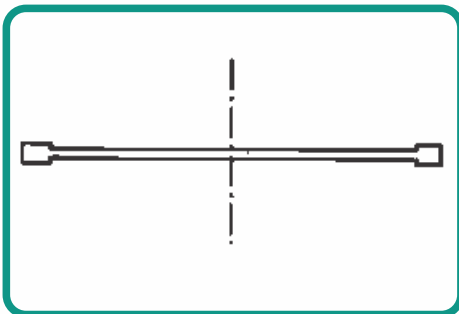


SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



TROUBLE SHOOTING

BLADE WORN OUT OF ROUND CAUSES



- Shaft bearings are worn. (Masonry and concrete)
- Engine is not properly tuned on concrete saws causing surges in blade rotation.
- Blade arbor hole is damaged from previous mismounting.
- Bond is too hard for material, causing a "rounding" and wearing one half of the blade more than the other.

REMEDIES

Install new blade shaft bearings or blade shaft as required.

Turns engine according to manufacturers manual.

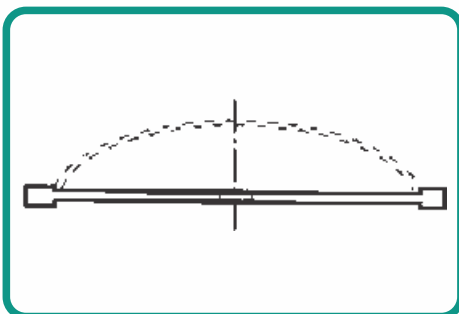
If steel centre thickness is 3mm or less at arbor hole but diamond segment can still be used, rebraze the segments onto steel centre. If steel centre thickness is 3mm or more, rebores arbor hole and bash to original size. Replace worn shaft or mounting arbor bushing.

On masonry saws, tighten blade collar.

On concrete saws, make sure that drive pin is functioning.

Use proper blade specification.

LOSS OF TENSION



CAUSES

- Steel centre has been overheating.
- Steel centre has been overheating due to blade spinning on arbor.
- Steel centre has been overheating due to rubbing the side of material being cut.
- Unequal pressure at blade clamping collars.
- Improper blade specification; blade is too hard for material being cut.

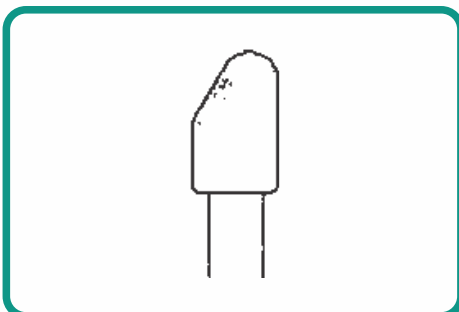
REMEDIES

Check water flow, distribution and lines. Tighten the blade shaft nut, make sure the drive pin is functioning (on concrete saws).

Properly align the saw to prevent square cutting. Make sure blade RPM is correct so that the blade operates at its tensioned speed.

Blade clamping collars must be identical in diameter and the recommended size. Use softer bonded blade to reduce operating stresses.

UNEVEN SEGMENT WEAR



CAUSES

- Insufficient water (usually on one side of blade)
- Equipment defects cause the segments to wear unevenly.
- Saw head is misaligned.

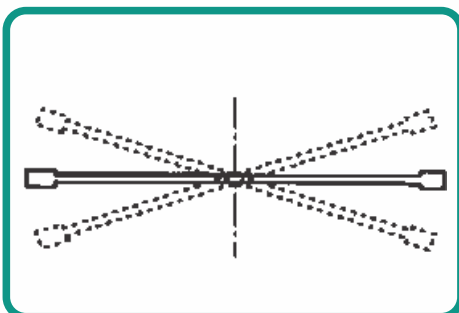
REMEDIES

Flush out water system and check flow and distribution to both sides of blades.

Replace bad bearings, worn arbor shaft, or misaligned spindle.

(Concrete saws: engine must run smoothly to prevent harmonic vibration) Check saw head alignment for squareness vertically and horizontally.

BLADE WOBBLER



CAUSES

- Blade is mounted on a defective saw.
- Blade runs at an improper speed.
- Blade collar diameters are not identical.
- Blade is bent as a result of dropping or twisting.

REMEDIES

Check for bad bearings, bent shaft or worn mounting arbor.

Make certain the blade shaft is running at recommended RPM to match tensioned speed of saw. For concrete saws, use a tachometer to ensure that engine is at the correct speed.



SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



TROUBLE SHOOTING

UNDERCUTTING STEEL CENTRE

CAUSES

- Abrasion of steel centre due to highly abrasive fines generated during cutting.

REMEDIES

Use as much water as possible to flush out fines generated during the cutting, or use wear - retardant cores.

CAUTION

- Wear-retardant cores are not always the ultimate solution to eliminating undercutting. Your best defence is to always provide adequate water flow to the steel concrete area immediately adjacent to the segment. This is especially important when making deep cuts.

CRACKS IN STEEL CENTRE

CAUSES

- Blade flutters in cut as a result of losing blade tension.
- Blade specification is too hard for the material being cut.

REMEDIES

Tighten blade shaft nut. Make sure blade is running at proper tensioned speed and that drive pin is functioning properly.

Use softer blade bond to reduce eliminate stresses which create cracks.

BAD SPINDLE BEARINGS

CAUSES

- Damaged bearings allow up and down movement of the shaft, causing the blade to hammer.
- This is the same as hitting the diamond segments with a hammer.

RESULTS

Short life.

Segment loss.

Chipped Material.

BENT SPINDLE

RESULTS

Blade Wobble.

Loss of Tension.

Short Life.



SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



TROUBLE SHOOTING

BENT SPINDLE: - RESULTS....

- BLADE WOBBLE.
- LOSS OF TENSION.
- SHORT LIFE.

BAD SPINDLE BEARINGS: - RESULTS....

- SHORT LIFE.
- SEGMENT LOSS.
- CHIPPED MATERIAL.

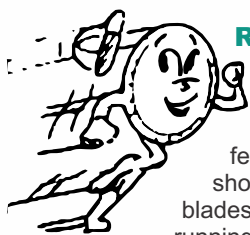
VARIABLES	CONDITION	CUTTING SPEED	BLADE LIFE
BOND HARDNESS	HARDER	SLOWER	LONGER
	SOFTER	FASTER	SHORTER
DIAMOND QUALITY	LOWER	SLOWER	SHORTER
	HIGHER	FASTER	LONGER
DIAMOND AMOUNT	LOWER	FASTER	SHORTER
	HIGHER	SLOWER	LONGER
SEGMENT WIDTH	THINNER	FASTER	SHORTER
	THICKER	SLOWER	LONGER
HORSEPOWER	LOWER	SLOWER	LONGER
BLADE RPM	LOWER	FASTER	SHORTER
	HIGHER	SLOWER	LONGER
WATER VOLUME	LOWER	FASTER	SHORTER
	HIGHER	SLOWER	LONGER
CUTTING DEPTH	SHALLOW	FASTER	LONGER
	DEEP	SLOWER	SHORTER
MATERIAL HARDNESS	HARDER	SLOWER	LONGER
	SOFTER	FASTER	SHORTER
ABRASIVENESS	MORE	FASTER	SHORTER
	LESS	SLOWER	LONGER
AGGREGATE SIZE	LARGER	SLOWER	SHORTER
	SMALLER	FASTER	LONGER
STEEL	LESS	FASTER	LONGER
	MORE	SLOWER	SHORTER



SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



TROUBLE SHOOTING



Run Me At My Right Speed...

Blades should generally be run between 9,000 and 13,000 surface feet per min. This means larger blades should be run at lower RPM than smaller blades. If you help sharpen a dull blade, try running it for a short time at a reduced RPM. If the blade seems to be wearing too quickly, run it at a faster speed.



I Like Water...

A good water flow equally on both sides of the blade of about four to five litres per minute (not high pressure) tap pressure is more than required.



Hold Me Tight...

When the blade is snugged up evenly with clean equal size flanges, which are free of burrs and rust it runs straighter and truer for maximum cutting efficiency. Bad seating results in uneven wear, egg shaped or burnt arbor holes.



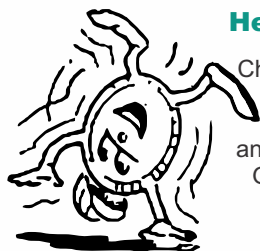
Use Me In The Right Places...

Through years of testing, special specifications have been developed to give the best cutting for each application. Green concrete, old concrete, bricks and clay, asphalt, wall sawing, etc. all have blades made specially for them. Making sure the blade is suited to your cutting job will result in faster, easier cutting and longer blade life.



Give Me Enough Power...

The more horsepower (torque not pressure on the blade) supplied to the spindle, the more efficient the cutting action will be. Low Horsepower may require a softer blade bond or less diamonds.



Help Me Run Round...

Check your machine for bad bearings, or bent or worn shafts. These cause the blade to run out of round and create excessive stress and wear. Good machine maintenance will give longer life and easier cutting.

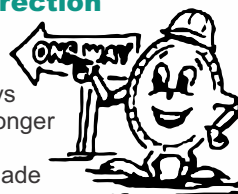
Don't Push Me Too Hard...

Excessive pressure on the blade will dull the diamonds, create stress in the steel core, and cause the blade to run out of round. On lighter saws, too much pressure causes the blade to rise out of the cut, and will lug the engine down. Listen for that smooth cutting sound and you know the blade is cutting at optimum speed.



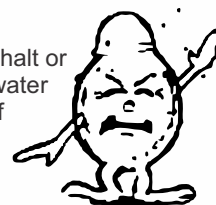
Turn Me In The Same Direction

Always put the blade on the spindle so that the blade is always running in the same direction. Longer blade life will result. There is an arrow to show you the way the blade was sharpened at the factory.



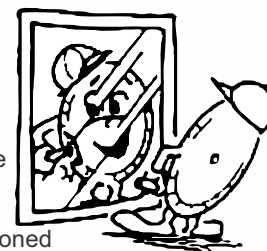
I Don't Like Sand...

If you have to cut through the asphalt or concrete slab into the sub base, water loss will result and the abrasion of the sand will put extreme wear on both the steel core and the diamond segment.



I'm Hammered To Run True...

Each blade is tensioned by a smithing process to run true at the speed (RPM) of the machine that it will run on. Blades run at higher speeds than they are tensioned for will wobble or flutter, creating excessive side wear or core cracking. "If your machine is anything other than standard, be sure to tell us your spindle speed".



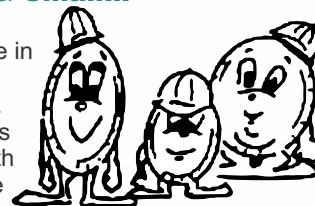
My Own Sawdust Hates Me...

The cuttings, if not properly flushed out of the cut, will abrade both the matrix and the steel core, resulting in a shorter life. Be sure to maintain sufficient water flow.



I'm Thin & Fat... Big & Small...

The cutting edge is available in many widths up to 25mm to meet your job requirements. Blades come in all diameters from 100mm to 1600mm with arbor holes to fit any spindle shaft. You can choose the one that will do the best job for you.



SLADDEN & MILNE
INDUSTRIAL SUPPLIES (PTY) LTD



SUMMARY

Always ensure that...

- You match blade specification with material to be cut.
- You inspect blade for damage before mounting on saw.
- You check arbor shaft and flanges for damage and uneven wear.
- You ensure that the blade is mounted on correct diameter shaft and the blade shaft nut is securely tightened with wrench.
- Do not force blade into material; allow blade to cut at its own speed.
- You check for continuous flow of water to both sides of the blade.
- You operate the blade within its recommended speed range.
- You do not operate saw with blade diameter larger than machines' capacity.
- You never operate any machine without blade guard in place.



We are also suppliers of the following:

- **Concrete Floor Saws, Electric & Petrol**
- **Floor Grinders, Electric & Petrol**
- **Core Drilling Machines**
- **Core Drilling Stands**
- **Hand Held Polishing Machines**
- **Sealants for Stone**
- **Silicones and Resins for Stone**
- **China Markers etc.**

“we saw differently”



“we saw differently”



Sladden & Milne Industrial Supplies (Pty) Ltd.

1 Simba Street
Sebenza
Edenvale

PO Box 516
Edenvale
1610

Tel: 011452 4153/4
Fax: 0114526365
info@avancer.co.za
www.avancer.co.za