OPERATING MANUAL

Tool-Co

BCA350
MASONRY SAW

CONTENT

SAFETY PRECAUTIONS

The saw blade should be inspected daily for excessive wear, core cracks, and arbor damage. Replace the blade if it shows any signs of damage.

- To mount the blade; clean the arbor and outer flange, then tighten the nut to secure the blade.
- Keep limbs and fingers clear from the blade when it is in use.
- To reduce risk of electrical shock, it is recommended to use a Ground Fault Circuit Interrupter (GFCI) switch
- Always have a qualified technician service the machine.

We recommend that you use the following Personal Protective Equipment (PPE) when operating the machine:

WEAR HEARING PROTECTION

WEAR EYE PROTECTION

WEAR A DUST MASK

USE A BLADE GUARD WHEN OPERATING THE SAW

GENERAL SAFETY RULES

- Never misuse the machine or work in an unsafe manner.
- Always wear the correct PPE when operating the machine. (See Page1)
- Always remain alert when the machine is in use. Operating the machine while distracted may lead to serious injury.
- Before you start working, do a basic risk assessment of your environment.
- Take measures to ensure that the machine is in a safe and trouble-free condition prior to usage. Use the machine only when all protective devices (i.e. guards, noise absorbers, emergency shut-off devices) are located and operating as intended.
- A visual check of the machine must be made at least once a shift to ensure that visible damages or faults are recognized. Any changes (including changes in the performance or behavior of the machine) must be reported to the supervisor. If required, cut off the power and correct any faults before using the machine.
- In the case of a malfunction, **stop the machine immediately**, then follow the operating instruction steps and look for any damages or faults.
- Be sure to connect the plug to a properly grounded socket, and that there is no damage to the cable to reduce the risk of electric shock.

HEALTH WARNINGS

Dust is created when sawing, which could contain harmful particles.
Some examples of these particles include:

- Lead from lead based paints,
- Crystalline silica from bricks, concrete, and other masonry products.
- Arsenic and chromium from chemically-treated lumber.

Your risk to these types of exposure varies depending on how often you do this type of work and your environment.

To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as dust masks that are specially designed to filter out microscopic particles.

UNPACK & INSPECTION

After opening the container, carefully lift the saw frame handles and place it on a flat, level working area. Be certain that you have the following items before you discard the container:

- **Saw:** 1 piece
- **Saw frame support:** 4 pieces
- **Water pump:** 1 piece
- **Hex Wrench No. 4,6,8:** 1 piece/each
- **Adjustable Wrench:** 1 piece
- **Wrench:** 1 piece

The Masonry Saw is shipped completely assembled and ready for use excluding the diamond blade. Inspect the saw for shipping damage. If any damage is found, contact the shipper immediately and file a freight claim.

TECHNICAL DATA

Rated Voltage	230V/50Hz
Rated Power	2.2kW
Cutting Materials	Block/Brick
Max Cutting Depth & Angles	90mm (90°) & 50mm (45°)
Cutting Length	650mm
Rated Speed	2800rpm
Blade Diameter	350mm
Arbor Size	25.4mm
Weight	72kg
Dimensions L x W x H	1276 x 736 x 862mm

ASSEMBLY & OPERATION

- After opening the package and confirming everything has been included, install the 4 removable legs underneath masonry saw frame by tightening knobs.
- Plug the rubber block into the drain hole. Please inspect the motor and wires before powering up the saw.
- DO NOT connect the plug into the power socket before installing blade.
- Keep the blade shaft clean and dry, remove the blade safety guard, install the blade on the blade shaft, tighten the collar.
- Fill the water pan with clean water and fully submerge the water pump.
- Connect power to the pump and be sure there is enough water flow to the blade before cutting.
- Keep the input hole of water pump clear, check regularly to avoid slurry block.
- Rotate the blade manually (slowly) to check the blade condition, make sure it's rolling smoothly and is properly mounted.
- Always ensure you are using the correct rated voltage.
- Keep the motor rotating in no-load condition for one minute before cutting in order to check related parts. Listen to the sound of the machine in operation for abnormal behavior.
- DO NOT use if there is anything wrong or unusual.
- Check pump operation to ensure enough water is flowing during operation.
- Put the cutting head in the desired position: either for sawing at right angles or for mitering (90° or 45°). Loosen the bolt slightly by using the ring wrench then tilt the head into the desired position. Tighten the bolt. The exact position 90° or 45° can be adjusted by means of the adjustment bolts.
- When nearing completion of the cut, pull back the cut, and slightly hold back the conveyor cart. Always keep the blade out of the cutting slot before turning off the motor.
- Place the cutting material on the conveyor cart, clamp and hold it firmly against the backstop. Align the cutting material line with the blade cut line.
- The motor will stop in an overload condition. This means the overheat protection device is working as intended.
- Turn off power and unplug the machine after each use. Empty the water tank, remove dust, debris and slurry from machine. Keep the equipment clean and dry.

WORKING INSTRUCTIONS

- Please study this operating manual carefully and ensure you follow the safety guidelines before using the BCA350 Masonry Saw.
- Professional training for workers is necessary.
- Always check work area for hidden wires, water or gas pipes before working.
- Sawing action requires the use of water, since the use of electrical equipment in wet areas is hazardous, the equipment must be grounded. Always wear insulated footwear and gloves for extra protection against shock hazards.
- Always wear safety goggles or glasses with side shields.
- Avoid vibrating or bumping the saw during cutting to insure equipment and blade lifespan is not reduced.
- Keep any electrical equipment, the motor and cables away from water.
- Keep the blade free from any material when you start the saw.
- DO NOT operate without water. Sufficient water flow is required to cool blade and remove slurry.
- DO NOT remove the safety guard while the machine is in operation.
- DO NOT use the machine when you are tired, distracted or under the influence of drugs, alcohol and any medication causing decreased awareness or control.

FAULT DIAGNOSIS

Symptom	Possible Cause	Action
Machine does not run when switched on	Power cord not properly fixed/plugged in	Check that the machine is properly connected to the power supply
	Power Cord Defective	Have the power cord checked or replace if necessary
	Main power switch defective	Have the main power switched checked and replace if necessary by a qualified electrician
	Loose electrical connection inside the electric system	Have the whole electric system of the machine checked by a qualified electrician
	Motor defective	Have the motor checked and replace if necessary by a qualified technician
Insufficient water flow	The water pump or water pipe is blocked	Check and clean water pump and water pipe
	The water pump or water pipe is faulty or damaged	Check the water pump and pipe and replace if necessary by a qualified technician
Motor stops (power cut out)	Too much pressure exerted while cutting	Exert less pressure when cutting
	Incorrect specification for saw blade	Use a saw blade which corresponds to the material being cut
	Saw has a defective electrical system	Have the electrical system checking by a qualified electrician
Poor machine performance (low power)	Power cord or extension cable is too long or the cable is still wound up inside the cable drum	Use a power cord or extension cable of the rated length, use a cable drum with cable fully extended
	Power network is insufficient	Observe the electrical ratings of the machine and connect it only to a power network which is rating compliant
	Drive motor no longer runs at rated RPM	Have the motor checked and replaced by a qualified technician if necessary

Symptom	Possible Cause	Action
Irregular run of the saw blade	Poor tension in the blade material	Return the saw blade to the manufacturer
Saw blade wobbles when the saw is running	Saw blade is damaged or bent	Have the saw blade aligned or flattened
		Clean the receiving flange
	Flange of the saw blade is damaged	Replace the saw blade flange
	Shaft of the motor is bent	Replace the electric motor
Diamond segment becomes loose	Overheating of the saw blade	Have the diamond segment soldered on the blade again
	Coolant is not sufficient	Ensure optimum flow of cooling water
Excessive wear	Wrong type of saw blade	Use a harder blade bond
	Shaft of motor causes wobbling	Have bearings of the motor replaced, or replace the motor
	Overheating	Ensure optimum flow of cooling water
Cracks in or near the diamond segment	Saw blade bond too hard	Use a softer blade bond
	Fixed flange is worn out	Have the fixed flange replaced
	Motor shaft bearing is worn	Replace the bearing of the motor shaft
The center hole in the saw blade has become wider due to wear	The saw blade has slipped on the motor shaft when running	The arbor of the saw blade must be fitted with an adapter ring
		Check the receiving flange and have it replaced if necessary
Appearance of cut is not optimal	Poor tension in the blade material	Return the blade to the manufacturer
	Too much load placed on the saw blade	Use a suitable blade
	Diamond segments are blunt	Sharpen the diamond blade on an abrasive material
Grinding marks on the saw blade	Material is not being fed parallel to the saw blade	Ensure that the direction of feed is parallel to the blade
	Poor tension in the blade material	Adjust the roller table or have it adjusted
	Too much load on the blade	Exert less pressure when cutting, proceed slower

WARNING!

For your safety, before performing any maintenance on the machine, ensure that the power is turned off and unplugged.

MAINTENANCE

After every use of the machine:

- Remove dirty water from the machine.
- Remove dirt and mud from the bottom of the machine.
- Check and renew worn parts to keep the parts in good condition, and check belts for wear and proper tension.
- Check and tighten screw nuts and wire connections to Keep them in good condition.

Before using the machine again:

- Connect the machine to an electrical power outlet equipped with a Ground Fault Circuit Interrupter (GFCI) switch. If the safety power breaker cuts off the electrical power supply, DO NOT try to operate the machine before having it checked by an authorized technician first.

Before storing the machine for a prolonged period of time:

- Clean and lubricate all moving parts.

After not using the machine for a long period, or removing from storage:

- Check that the legs are safely fixed.
- Check that all screw joints and nuts are fixed.
- Check that the roller table is in it’s guides and that it moves easily.
- With the saw blade removed, switch on the motor for a moment and switch it back off again. If the motor does not run, have the machine inspected by a qualified technician.

EXPLODED DIAGRAM A

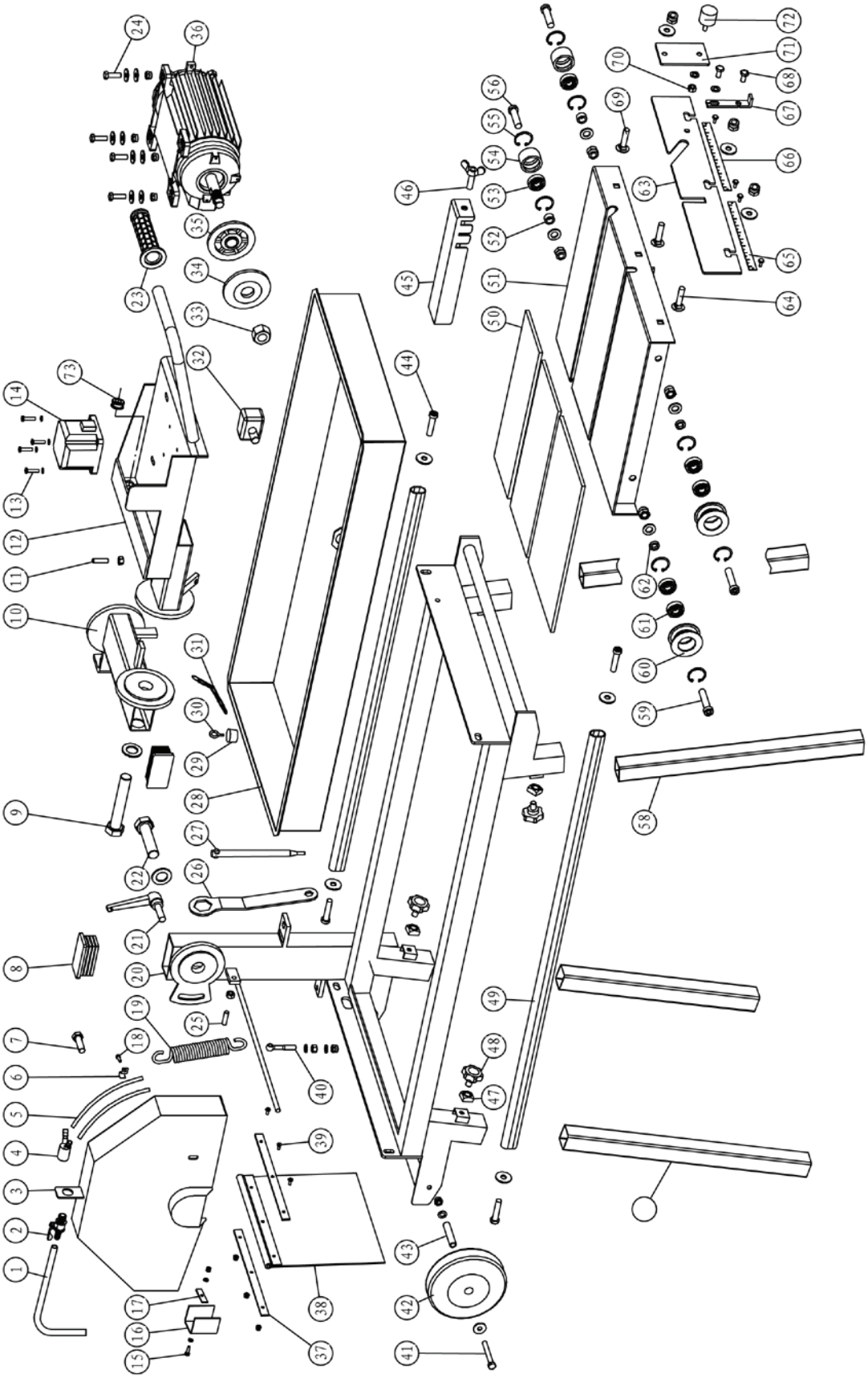


DIAGRAM A PARTS LIST

Item No.	Part No.	Description	Qty
1	100222	water tube12×2-2200	1
2	100399	water valve	1
3	100400	blade cover	1
4	100384	tee joint	1
5	100401	water tube5×1.5(300mm)	2
6	100402	clamp	2
7	100403	bolt M8X16	1
8	100404	plastic part	2
9	100405	hex.head bolt M20X120	1
	100406	flat washer 20	1
10	100407	rocker arm assembly	1
11	100408	Hex.socket set screws M8X30	2
	100409	hex nut M8	2
12	100410	bracket for motor	1
13	100411	Cross Recess Head Screw M5X45	4
	100412	flat washer 5	4
14	100413	switch	1
15	100414	hex. Head bolt M6X20	1
	100415	flat washer 6	2
	100416	hex. Lock nut M6	1
16	100417	water curtain	1
17	100418	water curtain clamp	1
18	100419	Hex. head tapping screws	2
19	100420	spring	1
20	100421	lathe bed	1
21	100422	handle	1
22	100423	hex.head bolt M20X80	1
	100406	flat washer 20	1
23	100217	jacket for handle	1
24	100424	hex.head bolt M8X30	4
	100425	washer 8	8
	100213	hex. Lock nut M8	4
25	100408	Hex.socket set screws M8X30	1
	100409	hex nut M8	1
26	100426	wrench	1
27	100427	pole for assemble and unassemble	1
28	100428	water tank	1
29	100429	rubber stopper	1
30	100430	screw eye	1

31	100431	ring	1
32	100432	water pump	1
33	100433	hex nut M20	1
34	100434	outside platen	1
35	100435	inside platen	1
36	100436	motor	1
37	100437	dead plate for water curtain clamp	2
38	100438	water curtain 400X300	1
39	100439	Cross Recess Head Screw M4X10	3
	100440	hex nut M4	3
40	100441	eyelet bolt M8X50	1
	100305	hex nut M8	1
	100338	hex. Lock nut M8	1
	100442	flat washer 8	2
41	100443	hex.head bolt M8X65	2
	100444	big washer 8	4
	100109	flat washer 8	4
	100445	hex. Lock nut M8	4
42	100446	wheel	2
43	100447	axle	2
44	100448	socket head screw	4
	100266	flat washer 10	4
45	100449	guide plate	1
46	100450	butterfly bolt	1
47	100451	square nut M10	4
48	100452	handle for tighten legs	4
49	100453	guide rail	2
50	100454	rubber plate	1
51	100455	cutting table	1
52	100456	cover for right roller	2
53	100457	bearing 6201RS	2
54	100458	right roller	2
55	100459	retaining ring 32	8
56	100460	socket head screw M12X45	2
	100239	hex. Lock nut M12	2
	100218	flat washer 12	2
58	100462	support legs	2
59	100463	socket head screw M12X50	2
	100239	hex. Lock nut M12	2
	100218	flat washer 12	2

60	100464	left roller	2
61	100457	bearing 6201RS	4
62	100465	cover for left roller	2
63	100466	back stop	1
64	100467	round head square neck bolt M10X3	3
	100468	hex.Look nut M10	3
	100469	big washer 10	3
65	100470	ruler 1	1
66	100471	ruler 2	1
	100599	tack rivet 2.5X5	4
67	100472	fix plate for cutting table	1
68	100473	hex.head bolt M8X25	2
	100442	flat washer 8	2
69	100474	half-round head square neck bolt M10X35	1
70	100475	hex. Nut M6	1
	100476	spring washer	1
71	100477	impingement baffle	1
72	100478	rubber hat	1
73	100551	Cord Sleeve	1

EXPLODED DIAGRAM B

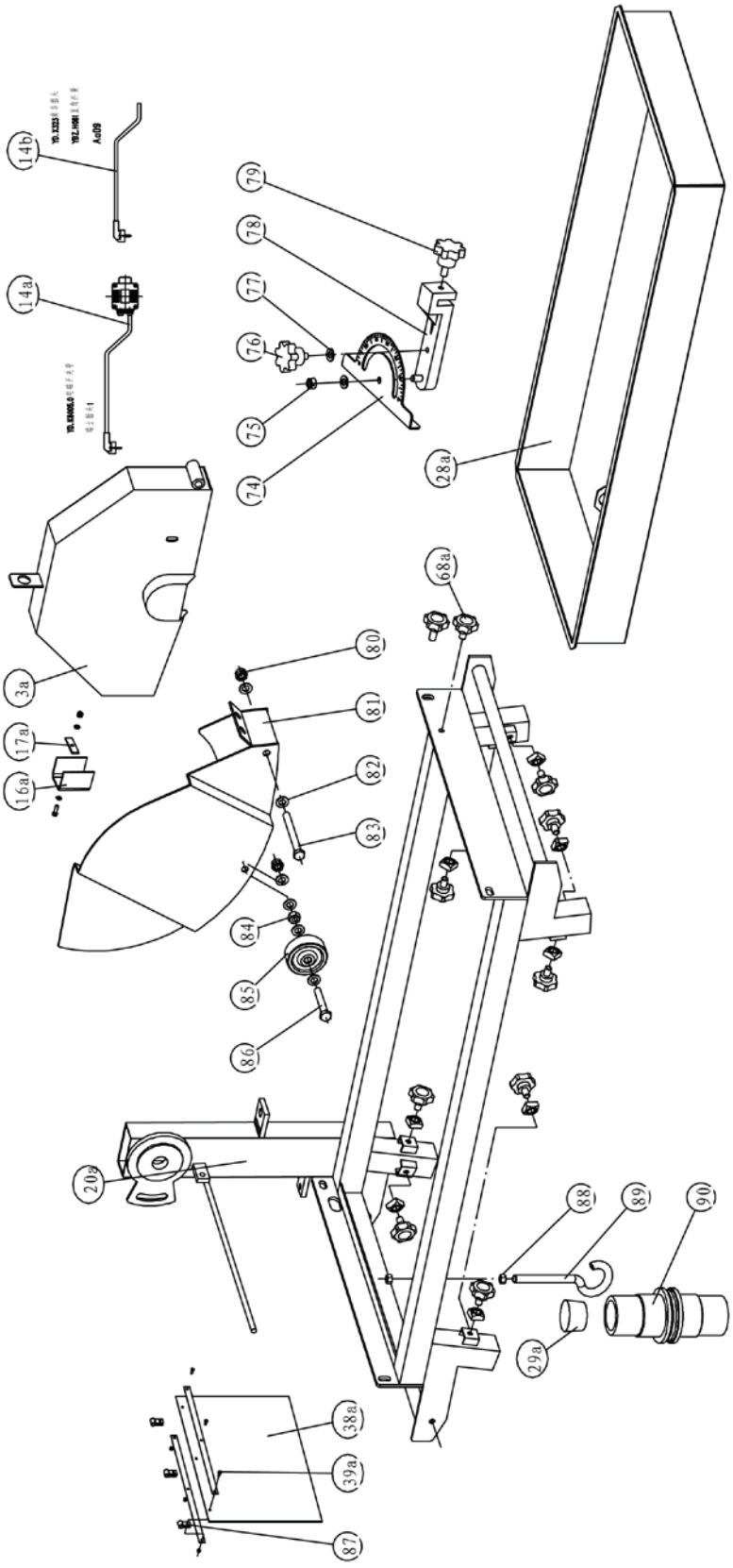


DIAGRAM B PARTS LIST

Item No.	Part No.	Description	Qty
3a	100552	blade cover	1
14a	100553	switch & Swiss plugs	1
14b	100553	switch	1
	100433-1	plug for South Africa	1
	100554	right angle spring	3
16a	100555	water curtain	1
17a	100556	plate	1
20a	100557	lathe bed	1
28a	100558	water tank	1
29a	100559	rubber plug	1
38a	100454	water curtain	1
29a	100560	Cross Recess Head Screw M4X10	3
	100440	hex nut M4	3
41a	100443	hex screw M8	2
	100444	washer 8	2
	100109	flat washer 8	4
	100445	hex lock nut M8	2
42a	100446	wheel	2
43a	100447	axle	2
73	100551	sleeve3X1.5	1
74	100561	angle gage	1
75	100713	hex nut	1
76	100562	stellate knob II	1
77	100442	flat washer	1
78	100563	back stop	1
79	100296	stellate knob I	1
80	100629	hex lock screw	2
81	100564	blade cover	1
82	100109	flat washer	7
83	100565	hex screw	1
84	100662	hex nut	1
85	100714	nylon wheel	1
86	100566	hex screw	1
87	100567	ring	3
88	100568	hex nut	1
89	100569	hock	1
90	100570	water-proof joint	1

RECOMMENDED BLADES

1	**BM300MS**	300 x 3.2 x 10 x 25.4mm	Masonry Blade
2	**BM350MS**	350 x 3.2 x 10 x 25.4mm	Masonry Blade

1	**LSDC300**	300 x 2.4 x 7 x 25.4mm	Hard Materials
2	**LSDC350**	350 x 3.2 x 5 x 25.4mm	Hard Materials
3	**LSDC450**	450 x 4 x 7 x 25.4mm	Hard Materials

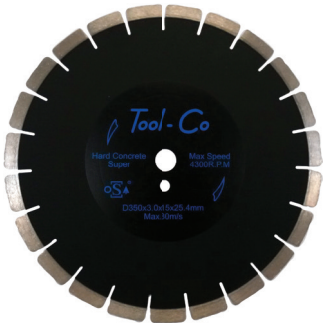
1	**LVR300P**	300 x 3.1 x 25.4mm	Rescue Blade
2	**LVR350P**	350 x 3.1 x 25.4mm	Rescue Blade

1	**HO350TP**	350 x 3.2 x 12 x 25.4mm	Trade Pro

1	**BO300DA**	300 x 3 x 12 x 25.4mm	Economy
2	**BO350DA**	350 x 3.2 x 15 x 25.4mm	Economy

RECOMMENDED BLADES

1	**BO300CS**	300 x 3 x 12 x 25.4mm	Standard Blade
2	**BO350CS**	350 x 3.2 x 15 x 25.4mm	Standard Blade



1	**BO350CH**	350 x 3 x 15 x 25mm	Premium Blade