MultiONE® USER & INSTALLATION GUIDE

The MultiONE® screw is a multi-purpose fastener for use in multiple materials such as Softwood, Hardwood, Treated Timbers, Composite Boards, Laminated Boards, Brick, Block, Concrete & various metals.

This installation guide is designed to help you get the most of the world's best fastener.

HEAD TYPES Select from the following head types based on the primary (top) material being fastened.

Countersunk Truss Head Used where a flush finish is needed e.g. in timber or in a pre-countersunk fitting such as a shelf bracket.

Contour Head Used when broad holding power &/or a decorative look is required. The underside of the head is flat and ideal for fixing sheet materials or heavier timbers.

PLEASE NOTE: **Bremick recommends the use of specialised screws for load critical and/or structural applications and/or specialised installations e.g. roofing, LVL's etc. Refer to material suppliers recommended fasteners for any specialised applications.**

INSTALLATION TOOLS

The MultiONE® can be installed using a Cordless drill or Cordless Impact driver.
Note: An Impact driver is not suitable for all applications. These instructions show tool settings for most common applications.

DRIVER BITS

MultiONE® screws include a complimentary TORX® compatible drive to optimise torque transfer from the drill driver to the screw. Always use the correct driver bit to suit the screw diameter (refer Table 1).

TABLE 1: DRIVER BITS; TENSILE, SHEAR, TORSIONAL STRENGTH *

Screw Gauge	Driver Truss Head	Driver Contour Head	Axial Tensile (kN)	Single Shear (kN)	Torsional (Nm)
8ga	T20	T20	6.2	5.8	5.9
10ga	T20	T25	10.6	8.3	11.4
12ga	T25	T30	14	9.6	13.5
14ga	T30	T30	20.3	11.1	20.8

TABLE 2: MASONRY FIXING DETAILS; AXIAL WITHDRAWAL LOADS FROM TIMBER & METAL *

Screw Size	Min. Timber Embed.‡ Depths (mm)		Axial Withdrawal Forces (kN)			Masonry								
						LOWER DENSITY MASONRY		HIGHER DENSITY MASONRY						
	F5 (Soft-wood) Radiata Pine	F17 Hard-wood	F5 (Soft-wood) Radiata Pine 30mm Embed.	F17 Hard-wood: 30mm Embed.	1.5mm BMT G450 Steel Purlin	Pilot Hole Diameter (mm) e.g. besser block, concrete pavers etc.	Wall Plug Guideline Required (mm)	Pilot Hole Diameter (mm) e.g. bricks, concrete etc.	MIN Pilot Hole Depth (mm)	MIN Embed.‡ Thread Depth (mm)	Clamping§ Capacity 'Truss' Head (max)	Clamping§ Capacity Contour Head (max)	Max Safe Load in 25MPA Concrete (kG)	Max Load in Extruded Common Brick (kG)
8 x 25	15	15	3.2	6.8	3.2	4mm	4mm	4mm	45mm	20mm	2mm	5mm	71	65
8 x 28	20	15	3.2	6.8	3.2	4mm	4mm	4mm	48mm	20mm	5mm	8mm	71	65
8 x 30	20	15	3.2	6.8	3.2	4mm	4mm	4mm	50mm	20mm	7mm	10mm	71	65
8 x 40	25	15	3.2	6.8	3.2	4mm	4mm	4mm	60mm	20mm	17mm	20mm	71	65
10 x 30	25	20	3.5	7.1	3.6	4mm	5mm	5mm	50mm	25mm	2mm	5mm	86	78
10 x 40	30	25	3.5	7.1	3.6	4mm	5mm	5mm	60mm	25mm	12mm	15mm	86	78
10 x 50	35	30	3.5	7.1	3.6	4mm	5mm	5mm	70mm	25mm	22mm	25mm	86	78
10 x 65	35	30	3.5	7.1	3.6	4mm	5mm	5mm	85mm	25mm	37mm	40mm	86	78
10 x 75	35	30	3.5	7.1	3.6	4mm	5mm	5mm	95mm	25mm	47mm	50mm	86	78
12 x 60	35	30	3.7	7.5	3.9	5mm	5mm	5.5mm	80mm	35mm	22mm	25mm	105	96
12 x 75	45	35	3.7	7.5	3.9	5mm	5mm	5.5mm	95mm	35mm	37mm	40mm	105	96
12x100	65	50	3.7	7.5	3.9	5mm	5mm	5.5mm	120mm	35mm	62mm	65mm	105	96
14 x 65	35	30	4.6	10.5	4.5	5.5mm	6mm	5.5mm	85mm	35mm	27mm	30mm	127	118
14 x 75	45	35	4.6	10.5	4.5	5.5mm	6mm	5.5mm	95mm	35mm	37mm	40mm	127	118
14x100	55	40	4.6	10.5	4.5	5.5mm	6mm	5.5mm	120mm	35mm	62mm	65mm	127	118

‡**Embedment Depths** *Minimum Embedment is the amount of screw that is embedded into the material that you are fixing to. Refer to Table 2 for the minimum recommended embedment in timber.*

§**Clamping Capacity** *Clamping capacity is the maximum material thickness that can be fastened to the base substrate material.*

**Notes: 1. Safe load has been calculated using a 4:1 Safety factor. 2. Safe loads are a guideline only and are not guaranteed 3. The Data in Table 1 & 2 represents characteristic data obtained under laboratory conditions and only apply to the Bremick MultiONE® products. Appropriate safety factors must be applied.*

Tip ***When fixing an item subject to gravitational load, vibration or leverage load, greater embedment depth may be required. Examples of such installations are ceiling fans, gates etc***

PACKAGING is 100% recyclable and re-usable cardboard. For more information on recycling visit **www.arl.org.au**

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INSTALLING THE MultiONE®

MultiONE® Self Drilling Point The MultiONE® has an advanced 'Self Drilling' Point, designed to drill a hole in the majority of materials (see over) which allows the thread to immediately engage with the materials being fastened.

General Advice on installing MultiONE® screws Fit screw to the driver bit. Place drill tip at fastening location. Apply moderate to firm pressure depending on the material (see over). Commence drilling for the tip to drill a hole. Maintain firm pressure throughout drilling, slowing down as the screw approaches 'home'. Do not over tighten once the screw reaches a flush position.

HARDWOOD & SOFTWOOD

Tool IMPACT Driver / Cordless Drill	**Starting Speed** Slow / Moderate	**Starting Pressure** Moderate to Firm

1. Select an appropriate screw length in accordance with recommended embedment depths on Table 2.
2. As the MultiONE® drills it's own pilot hole, the risk of splitting timber is dramatically reduced even close to the edge. **Pre-drilling &/or pre-countersinking may be required on some occasions e.g. for harder timbers such as spotted gum &/ or for ages hardwoods etc. Test in an off cut to confirm this.**
3. In SOFTWOOD, ease back on torque/speed as the screw approaches home in order to avoid overdriving.

Tip ***Removing from hardwood, use a cordless drill driver on low (or "1") speed (DO NOT USE an IMPACT DRIVER). Removal from hardwood at high speeds or high torque may result in snapping.***

LAMINATES & PLY'S

Tool IMPACT Driver / Cordless Drill	**Starting Speed** Moderate	**Starting Pressure** Low

Installation technique is similar to hardwood. Gradually increase drill speed as the screw "takes up".

Tip ***In timber, laminates and ply's etc: start slowly & speed up as the thread is drawn into the material(s)***

SHEET MATERIALS/METALS UP TO 3MM THICK (excludes Aluminium)

Tool IMPACT Driver / Cordless Drill	**Starting Speed** Moderate	**Starting Pressure** Moderate to Firm

1. Select an appropriate screw length in accordance with recommended embedment depths on Table 2.
2. The MultiONE® can be used to quickly and efficiently fasten various sheet materials such as fibre cement sheet, metals and acrylic sheet.
3. To avoid edge break away on soft or brittle materials, back off the speed as the screw nears 'home'. **Do not over tighten.**

Tip ***When fixing hardwood into metal, pre-drilling is recommended. Alternatively, use a Bremick wing screw for this specific application.***

ALUMINIUM SECTION 1.5MM~2.5MM

Tool IMPACT Driver / Cordless Drill	**Starting Speed** Fast	**Starting Pressure** Firm

1. Select an appropriate screw length in accordance with recommended embedment depths on Table 2.
2. Using a high speed and firm pressure will reduce heat build up and the material softening.
3. Apply a lubricant such as WD-40® to the area being drilled to assist in fast penetration.

CONCRETE AND BLOCK WORK

HIGHER DENSITY MASONRY	**Tool** Cordless Drill "**Screw**" setting **(with pilot hole)**	**Starting Speed** Moderate	**Starting Pressure** Firm
LOWER DENSITY MASONRY	**Tool** Cordless Drill "**Hammer**" setting **(no pilot hole)**	**Starting Speed** Moderate	**Starting Pressure** Firm

Tip ***Do not use an IMPACT driver on Concrete or Block Work. A pilot hole is recommended for installing in Concrete.***

Installing MultiONE® (with a pilot hole) The MultiONE® is suitable for installation in concrete with a pre-drilled pilot hole, (refer Table 2) drilled 20mm deeper than the screw embedment depth. **In besser block, a 5mm hole is recommended & in brick or concrete a 6mm hole is required.** Use a masonry drill bit with the drill set to hammer action. Clean the pilot hole thoroughly with a pump after drilling to ensure all excess material has been removed.

Installing MultiONE® (no pilot hole) Install MultiONE® using moderate speed setting on your cordless drill set to hammer action. A higher torque setting may be required in harder materials. **Use of a wall plug in hollow masonry substrates (e.g. common bricks, block work) is recommended as shown on instructional video found on the MultiONE® website (www.multi1.com.au)**

Tip ***PLUGS ARE REQUIRED in a HOLLOW based masonry substrate. In a SOLID masonry substrate, NO PLUG IS REQUIRED once the hole is pre-drilled.***

EXTRUDED (COMMON) BRICKS (Do not fix into mortar joints between bricks)

Tool Cordless Drill "**Screw**" setting **(with pilot hole)**	**Starting Speed** Moderate	**Starting Pressure** Firm

Tip ***Do not use an IMPACT driver on Extruded (Common) Bricks.***

MultiONE® is suitable for fastening into extruded common bricks. However, brick density can vary dramatically. In some instances, the MultiONE® may be installed without pre-drilling, using a drill set to hammer action. If pilot holes are required, Refer Table 2.

Consideration must be given to the fact that some bricks contain voids. A longer length screw may be required to ensure the screw embeds into the other side of the void.

For further ideas and installation videos & techniques visit our 'Videos & Installation' section at www.multi1.com.au