



MIRANDA Hand & Power Hacksaws Metal Cutting Bandsaw Blades



METAL & POWER HACKSAWS

HAND HACKSAWS : Range

Metric	:	Length 250 mm & 300 mm Width 12.5 mm Thickness 0.63 mm
Inches	:	Length 10" & 12" Width ½" Gauge 23G
Choice of T.P.I.	:	14, 18, 24, 32
Grade	:	HSS, BIMETAL

POWER HACKSAWS : Range

Metric	:	Length 300 mm & 900 mm Width 25 mm, 32mm, 40mm, 50mm Thickness 1.25mm, 1.60mm, 2.00mm, 2.5mm
Inches	:	Length 12" & 36" Width 1", 1.1/4", 1.1/2", 2" Gauge 18G, 16G, 14G, 12G
Choice of T.P.I.	:	4, 6, 10, 14
Grade	:	HSS, BIMETAL

Range of **MIRANDA** brand Hacksaws manufactured by **MIRANDA TOOLS**

HAND HACKSAW BLADES - HSS ALL HARD			HSS - BIMETAL	
Nominal Size		TPI	TPI	
Inches	Millimeters		Constant Pitch	Variable Pitch
12 x ½ x 0.025 (23 G)	300 x 12.5 x 0.63	14 18 24 32	14 18 24 32	
10 x ½ x 0.025 (23 G)	250 x 12.5 x 0.63	18 24		

HAND HACKSAW BLADES - HSS ALL HARD			HSS - BIMETAL	
Nominal Size		TPI	TPI	
Inches	Millimeters		Constant Pitch	Variable Pitch
12 x 1 x 0.050 (18 G)	300 x 25 x 1.25	10 14	10 14	6/10
14 x 1 x 0.050 (18 G)	350 x 25 x 1.25	6 10 14	6 10 14	6/10
16 x 1 x 0.050 (18 G)	400 x 25 x 1.25	10 14	10 14	6/10
17 x 1 x 0.050 (18 G)	425 x 25 x 1.25	10 14	10 14	-
18 x 1 x 0.050 (18 G)	450 x 25 x 1.25	10 14	10 14	6/10
14 x 1¼ x 0.062 (16 G)	350 x 32 x 1.60	6 10	6 10	4/6 5/8 6/10
16 x 1¼ x 0.062 (16 G)	400 x 32 x 1.60	6 10	6 10	4/6 5/8 6/10
17 x 1¼ x 0.062 (16 G)	425 x 32 x 1.60	6 10	6 10	4/6 5/8
18 x 1¼ x 0.062 (16 G)	450 x 32 x 1.60	6 10	6 10	4/6 5/8 6/10
18 x 1¼ x 0.080 (14 G)	450 x 32 x 2.00	4 6 10	-	-
18 x 1¼ x 0.062 (16 G)	450 x 40 x 1.60	6 10	-	-
18 x 1¼ x 0.080 (14 G)	450 x 40 x 2.00	4 6 10	6	3/4 4/6 5/8 6/10
20 x 1½ x 0.080 (14 G)	500 x 40 x 2.00	4 6 10	6	-
21 x 1½ x 0.080 (14 G)	525 x 40 x 2.00	4 6 10	4 6	3/4 4/6 5/8
22 x 1½ x 0.080 (14 G)	550 x 40 x 2.00	4 6	4 6	3/4 4/6 5/8
24 x 1½ x 0.080 (14 G)	600 x 40 x 2.00	4 6 10	4 6	3/4 4/6 5/8
24 x 1½ x 0.100 (12 G)	600 x 40 x 2.50	4 6	-	-
28 x 1½ x 0.100 (12 G)	700 x 40 x 2.50	4 6	-	-
30 x 1½ x 0.100 (12 G)	750 x 40 x 2.50	4 6	-	-
24 x 2 x 0.080 (14 G)	600 x 50 x 2.00	4 6	-	-
24 x 2 x 0.100 (12 G)	600 x 40 x 2.50	4 6	4 6	3/4 4/6
28 x 2 x 0.100 (12 G)	700 x 50 x 2.50	4 6	4 6	-
30 x 2 x 0.100 (12 G)	750 x 50 x 2.50	4 6	4 6	-
32 x 2 x 0.100 (12 G)	800 x 50 x 2.50	4 6	4 6	3/4 4/6
36 x 2 x 0.100 (12 G)	900 x 5 x 2.50	4 6	4 6	3/4 4/6
32 x 2½ x 0.100 (12 G)	800 x 55 x 2.50	-	4	-



Proper selection of Blade

In selecting a blade always follow the "Three Teeth Rule" which requires that during cutting, minimum of three teeth be continuously in contact with the work piece.

For Thin Sections : Use a fine teeth blade or else metal wedges up between teeth and strip them off. If the section is too thin to follow the "Three Teeth Rule", use a very light steady stroke.

For Thick Sections: Use a coarse teeth blade with heavy pressure. This gives greater pressure per tooth and consequently a deeper cut. The larger space between teeth gives ample chip clearance.

For Hand Sections: Special care must be taken when cutting harder materials. It is better in terms of blade life to use finer tooth blades, with light pressure and slower speed of cutting or else heat is built up rapidly on the cutting edge causing the teeth to soften even in the case of High Speed Steel blades. Faster speeds are permissible if a coolant is used.

PACKING

Hand Hacksaw	100 Nos. per box
Power Hacksaw	
12 x 1 to 18 x 1	10 Nos. per box
14 x 1¼ to 18 x 1¼	10 Nos. per box
18 x 1½	10 Nos. per box
21 x 1½ to 24 x 1½	5 Nos. per box
24 x 2	5 Nos. per box

All dimensions in inches

Blade Selection Chart

Material	Teeth Per Inch			Strokes/ min.	Force (kg.)	Coolant
	Below 1"	Below 2"	Above 1"			
Aluminium Alloy	10	6	4	120/130	25	Yes
Brass	10	6	4	100/120	25	Yes
Bronze	10	6	4	70/90	55	No
Cast Iron	10	6	4	70/90	55	No
Copper	14	10	6	70/90	55	No
Mild Steel Tube	14	10	6	120/130	25	Yes
Steel Channels	14	10	6	100/120	25	Yes
Steel Rails	14	10	6	100/120	25	Yes
High Tensile CI	14	10	6	70/90	55	No
HSS & Tool Steel	14	10	6	70/75	65	Yes
HCHCr, Ti Alloy	14	10	6	40	65	No

Care to be taken for better cutting.

- Mount of blade on the frame in the direction indicated on it.
- Apply the correct tension to the blade.
- Ensure that pressure is applied during cutting stroke & is off during the return to avoid "dragging" and consequent dulling of the teeth.
- Do not start cutting on sharp edges as this violates the "Three Teeth rule".
- Start the cut at a slight angle and light pressure, gradually increasing the pressure as more teeth come in contact with the job.
- For extremely thin sections, clamp the section between two pieces of wood & cut as a whole.

Trouble Shooting Chart

Problem	Cause	Ready
Teeth ripping	- Violation of the "Three Teeth Rule" - Excessive Pressure	- Choose proper TPI as per blade selection chart - Reduce the Pressure
Blade Breakage	- Blade in contact with work material before cutting - Starting the cut in a slot previously cut. - Excessive feed. - Worn out blade	- Start the machine with blade above the work piece - Start a fresh cut with a new blade or turn the work piece over and saw to meet the old cut. - Reduce the pressure - Replace the blade
Pin Hole Breakage	- Excessive tension - Improper mounting - Wrong choice of Blade - Absence of coolant - Hard spots.	- Reduce Tension - Ensure proper clamping of the blade against the frame - Choose the blade as per chart - Use Coolant as per chart - Reduce speed & increase pressure
Taper Cutting	- Inadequate tension - Worn out blade - Very hard spot - Excessive pressure - Worn out frame	- Adjust tension - Replace blade - Start a new cut - Reduce pressure - Repair frame



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