

For sharpening plane irons, chisels and other woodworking tools, there are two systems used worldwide, oilstones and waterstones. Norton Abrasives is the originator and worldwide leader in oilstones since 1837. In 1993, Norton Abrasives introduced the first US made synthetic waterstone. In just 10 years, the Norton waterstone has become widely accepted with Fine Woodworking (April 2002), Popular Woodworking (August 2003) and many other industry experts citing it as the best in the industry. Both systems have their own benefits and they do a superb job in achieving a superior edge. Please review these and see which system meets your need. If you have any questions, please e-mail us at Norton.Consumer@saint-gobain.com.



Difference Between Oilstone and Waterstone Sharpening Systems

OILSTONES	WATERSTONES	REASON
less maintenance	more maintenance	waterstones wear more rapidly and require frequent reflattening
lower long term cost	higher long term cost	while the initial cost for both is the same, waterstones wear much more rapidly
slower cut	faster cut	waterstones wear more rapidly thereby exposing sharp cutting edges more frequently
more clean up	less clean up	oil tends to be tougher to keep clean than water
excellent edge	best edge	while Norton Hard Translucent Arkansas gives an excellent edge, the 8000 grit waterstone is superior



8 x 3 Oilstones in Color Coded, Self Contained Sharpening Stations

PART NUMBER	SIZE	GRIT	ITEM #
CRYSTOLON (SILICON CARBIDE) BENCHSTONES			
SINGLE GRIT			
614636 54457	1 8 x 3 x 1/2	Fine	FJB83
614636 54458	8 8 x 3 x 1/2	Medium	MJB83
614636 54459	5 8 x 3 x 1/2	Coarse	CJB83

INDIA (ALUMINUM OXIDE) BENCHSTONES

PART NUMBER	SIZE	GRIT	ITEM #
SINGLE GRIT			
614636 54460	1 8 x 3 x 1/2	Fine	FB83
614636 54461	8 8 x 3 x 1/2	Medium	MB83
614636 54462	5 8 x 3 x 1/2	Coarse	CB83

ARKANSAS BENCHSTONES

PART NUMBER	SIZE	GRIT	ITEM #
HARD TRANSLUCENT ARKANSAS			
614636 54464	9 8x3x1/2	Ultra Fine	HTB83

IM313-CIH

PART NUMBER	GRIT	ITEM #
IM313 SYSTEM		
11-1/2 X 2-1/2 X 1/2		
614636 54212	6	Kit includes: 1 Coarse Crystolon, 1 Medium India, 1 Hard Translucent Arkansas, IM313-CIH 1 oil and 1 reservoir unit
614636 85980	4	Coarse Crystolon - Replacement Stone
614636 85970	5	Fine India - Replacement Stone
614636 54214	0	Medium India - Replacement Stone
614636 85965	1	Hard Translucent Arkansas - Replacement Stone

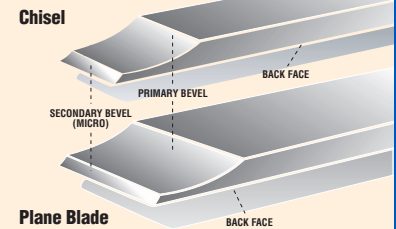
Waterstones

PART NUMBER	SIZE	GRIT	ITEM #
WATERSTONES			
SINGLE GRIT			
614636 89505	5 8 x 3 x 1	220	-
614636 89506	2 8 x 3 x 1	1000	-
614636 89507	9 8 x 3 x 1	4000	-
614636 89508	6 8 x 3 x 1	8000	-
COMBINATION GRIT			
614636 24335	1 8 x 3 x 1	220 / 1000	-
614636 24450	1 8 x 3 x 1	1000 / 4000	-
614636 24336	8 8 x 3 x 1	4000 / 8000	-

SHARPENING PRODUCT BASICS

Woodworking Tools

The procedures and products used for sharpening straight edge woodworking tools are widely debated by woodworking experts. Today there are many combinations of products that can provide the finish and sharpness for every level of woodworking project. Norton Abrasives is the only company that can provide all the products for every method of choice. Outlined below are the basic procedures and product recommendations by steps.



PROCEDURE	OILSTONE SYSTEM	WATERSTONE SYSTEM
BACK FACE		
Steps 1-4 is only needed on new tools or damaged tools. The flatter and more polished the back is, the sharper the cutting edge will be and the longer it will stay sharp.		
Step 1*	Heavy stock removal Crystolon - Coarse	220 grit
Step 2*	Light stock removal India - Medium or Fine	1000 grit
Step 3	Final finishing & polishing Norton Hard Translucent Arkansas	4000 grit
Step 4	Highly reflective polishing 1 Micron Diamond Compound ***	8000 grit
PRIMARY BEVEL		
Step 5 is done on new tools or whenever a tool is damaged. Otherwise, this step is done every 10-15 sharpenings of the secondary (micro) bevel.		
Step 5 (Option 1)	Creating a concave primary bevel - Hollow grinding**	Bench wheel - 38A60-J
Step 5 (Option 2)*	Creating a flat primary bevel India - Medium or Fine	1000 grit
SECONDARY (MICRO) BEVEL		
Steps 6-8 are done frequently to keep tools in excellent condition. Each step should be done until a burr or wire edge forms. This burr or wire edge is a signal that it is time to move to the next step. This wire edge must be removed and is done by alternately rubbing the backface and secondary angle of the tool on the finest stone until the wire edge falls off. If the wire edge does not fall off with this procedure, check the back of the tool for flatness.		
Step 6*	Initial sharpening or resharpening India - Medium or Fine	1000 grit
Step 7	Final finishing & polishing Norton Hard Translucent Arkansas	4000 grit
Step 8	Highly reflective polishing 1 Micron Diamond Compound***	8000 grit

* OTHER ABRASIVE PRODUCTS SUCH AS DIAMOND BENCHSTONES, DIAMOND COMPOUND AND COATED ABRASIVES WILL PERFORM STEPS 1, 2, 5 & 6. PLEASE SEE THESE SECTIONS FOR RECOMMENDATIONS.
 ** HOLLOW GRINDING IS DONE ON A BENCH GRINDER: 6" IS RECOMMENDED FOR A SLIGHTLY LARGER CURVATURE. REFER TO SHARPENING PRODUCTS CATALOG FOR MORE INFORMATION
 *** DIAMOND COMPOUND MUST BE USED ON A VERY FLAT SURFACE TO ACHIEVE THE HIGHLY REFLECTIVE POLISH. REFER TO SHARPENING PRODUCTS CATALOG FOR MORE INFORMATION

Relative Sharpening Comparisons for Norton Abrasive Products

CRYSTOLON (SILICON CARBIDE) INDIA (ALUMINUM OXIDE)	ARKANSAS (WASHITA, SOFT, HARD) WHITE, BLACK, TRANSLUCENT	DIAMOND STONES	WATERSTONES		COATED ABRASIVES (WATERPROOF SANDPAPER)		DIAMOND COMPOUND MICRON SIZE
				JIS (JAPAN)	CAMI (USA)	FEPA (EUROPE)	
Coarse Crystolon		Diamond				P100	141
Coarse India						P120	127
							116
Medium Crystolon						P150	97
							93
Medium India		Extra Coarse Diamond (220)	Norton 220 (grey)	220		P180	78
						P220	65
							60
						P240	58
							53.5
						P280	52.5
							50
						P320	46
Fine Crystolon		Coarse Diamond (325)					45
						P360	43
					360		40.5
Fine India	Washita					P400	36
							35
						P600	29
							25.8
Ex. Fine India	Soft Arkansas	Fine Diamond (600)		600		P800	23
							22
				800		P1200	16
			Norton 1000 (tan)	1000			14
						P1500	12.6
	Hard White Arkansas	Extra Fine Diamond (1200)		1200			11
						P2000	10.3
				1500			9.2
							9
							9
						P2500	8.4
							8.4
				2000			7.5
	Hard Black Arkansas Hard Translucent Arkansas		Norton 4000 (white)	4000	2000		6
							5
			Norton 8000 (yellow)	8000			3
							1.2
							1
				15000			0.5



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