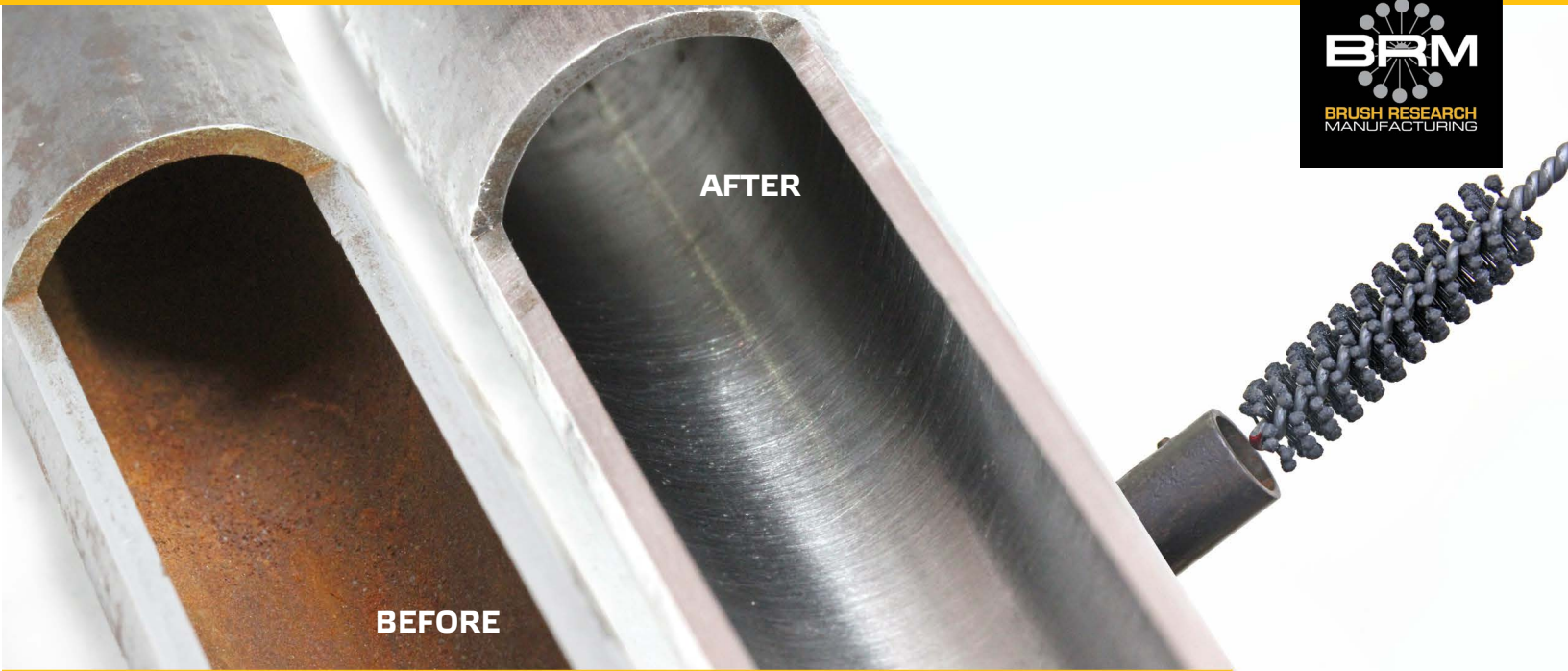


FLEX-HONE® PIPE CLEANING - RUST REMOVAL



REMOVE CORROSION AND RUST WITH MINIMAL DIMENSIONAL CHANGE

Repairing and rebuilding parts due to rust and corrosion is costly. Rust can deem parts unusable and can be a painful maintenance task whether the part is a small diameter barrel or a larger diameter pipe for the oil and gas industry. This rusted .708" carbon steel shotgun barrel was in need of rehabilitation and the Flex-Hone tool did a quick job of freshening up the cylinder. All that was needed was 3 quick strokes in a clockwise direction and 3 strokes in a counter clockwise direction to return this cylinder to a better condition.

For more information see: info.brushresearch.com/download-flex-hone-resource-guide

PRODUCT	DETAILS	OPERATING	PARAMETERS
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BRUSH PART ID	BC18M18
DESCRIPTION	18MM (.709") DIAMETER 180 GRIT SILICON CARBIDE FLEX-HONE

ADDITIONAL EQUIPMENT

- VIRTUALLY ANY ROTATING SPINDLE
- FLEX-HONE OIL

- SPEED – 1000 RPM
- FEED – 360 IPM
- 3 PASSES CLOCKWISE
- 3 PASSES COUNTER CLOCKWISE



BENEFITS

DIRECT BENEFITS

- REMOVAL OF RUST AND CORROSION
- LESS THAN .0005" OF MATERIAL REMOVED
- ONLY 10 SECONDS PER PART
- KEEP CRITICAL TOLERANCES

INDIRECT BENEFITS

- INCREASE PART SERVICE LIFE
- INCREASE QUALITY AND CONSISTENCY
- REDUCE COSTLY REPLACEMENT PARTS
- TOOLS CAN BE USED IN THE FIELD



FLEX-HONE®

BC STANDARD DUTY



SILICON CARBIDE (SC)

Ideal for mild steel, stainless steel and cast iron. Order by bore size. Also available in 8 different abrasives types and 11 grit selections.



GBD HEAVY DUTY



GB STANDARD DUTY

GRAINGER PART NUMBERS

Bore Diameter	Series	Overall Length	GRAINGER PART NUMBERS												
			20 Grit	40 Grit	60 Grit	80 Grit	120 Grit	180 Grit	240 Grit	320 Grit	400 Grit	600 Grit	800 Grit		
4mm (.157")	BC	6"								2ZYF5	2ZYF6	337WD3	59WX55	59WX58	59WX61
4.5mm (.177")	BC	6"								2ZYF8	2ZYF9	337VD1	59WX33	59WX36	59WX39
3/16" (4.75mm)	BC	6"								2ZYG2	2ZYG3	2ZYG4	59WU71	59WU74	59WU77
5mm (.197")	BC	8"			59WY58	59WY65		2ZYG5	2ZYG6	746D76	2ZYG8	59WY55	59WY59	59WY64	59WY66
5.5mm (.217")	BC	8"			59WX84	59WX91	2ZYG9	337WM2	746D77	337WE8	59WX81	59WX85	59WX92		
6mm (.236")	BC	8"			59WZ25	59WZ32	2ZYH4	2ZYH5	2ZYH6	2ZYH7	59WZ22	59WZ26	59WZ33		
6.4mm (.250")	BC	8"			59WY92	59WY99	2ZYH8	2ZYH9	2ZYJ1	2ZYJ2	59WY89	59WY93	59WZ01		
7mm (.276")	BC	8"			59WZ99	59XA07	337VY0	2ZYJ4	2ZYJ5	2ZYJ6	59WZ96	59XA01	59XA08		
8mm (.315")	BC	8"			59XA34	59XA40	2ZYJ7	2ZYJ8	2ZYJ9	2ZYK1	59XA31	337WF8	59XA41		
9mm (.354")	BC	8"			59XC02	59XC09	337VD4	2ZYK3	2ZYK4	2ZYK5	59XA98	59XC03	59XC10		
9.5mm (.375")	BC	8"			59XA67	59XA74	337VD6	2ZYK7	2ZYK8	337VY5	59XA64	59XA68	59XA75		
10mm (.394")	BC	8"			59WL22	59WL29	2ZYL1	2ZYL2	2ZYL3	2ZYL4	59WL19	59WL23	59WL30		
11mm (.433")	BC	8"			59WL54	59WL61	337WM3	2ZYL6	2ZYL7	337VZ3	59WL51	59WL55	59WL62		
12mm (.472")	BC	8"			59WM29	59WM36	2ZYL9	2ZYN1	2ZYN2	337WF4	59WM26	59WM30	59WM37		
1/2" (12.7mm)	BC	8"	59WL77	59WL88	59WL94	59WM02	2ZYN4	2ZYN5	2ZYN6	2ZYN7	59WL89	59WL95	59WM03		
14mm (.552")	BC	8"	59WM52	59WM63	59WM69	59WM76	2ZYN8	2ZYN9	2ZYP1	337VE5	59WM64	59WM70	59WM77		
5/8" (16mm)	BC	8"	59WY08	59WY19	59WY25	59WY31	2ZYP3	2ZYP4	2ZYP5	2ZYP6	59WY20	19ND93	59WY32		
18mm (.709")	BC	8"	59WN31	59WN42	59WN48	59WN55	2ZYP7	2ZYP8	2ZYP9	337VC4	59WN43	59WN49	59WN56		
3/4" (19mm)	BC	8"	59WU89	59WX01	59WX07	59WX14	2ZYR2	2ZYR3	2ZYR4	2ZYR5	59WX02	59WX08	59WX15		
20mm (.787")	BC	8"	59WP12	59WP23	337WF9	59WP34	2ZYR6	2ZYR7	2ZYR8	2ZYR9	59WP24	20UH14	59WP35		
7/8" (22.2mm)	BC	8"	59WZ48	59WZ59	59WZ65	59WZ72	2ZYT1	2ZYT2	2ZYT3	2ZYT4	59WZ60	59WZ66	59WZ73		
15/16 (23.8mm)	BC	8"	59WM92	59WN03	59WN09	59WN15	2ZYT5	2ZYT6	2ZYT7	2ZYT8	59WN04	19ND94	59WN16		
1" (25.4mm)	BC	8"	59WK71	59WK82	59WK88	59WK94	2ZYT9	2ZYU1	2ZYU2	2ZYU3	59WK83	29WK47	59WK95		
1-1/8" (29mm)	BC	8"	59VZ69	59VZ79	59VZ85	59VZ91	2ZYU4	2ZYU5	2ZYU6	2ZYU7	59VZ80	29WK46	59VZ92		
1-1/4" (31.8mm)	BC	8"	59WA08	59WA19	59WA25	59WA32	2ZYU8	2ZYU9	2ZV1	2ZV2	59WA20	59WA26	59WA33		
1-3/8" (35mm)	BC	8"	59WA48	59WA59	59WA65	59WA71	2ZV3	2ZV4	2ZV5	2ZV6	59WA60	337WM1	59WA72		
1-1/2" (38mm)	BC	8"	59WA87	59WA98	29WK41	59WC10	2ZV7	2ZV8	2ZV9	2ZYW1	59WA99	20UH13	59WC11		
1-5/8" (41mm)	BC	8"	59WC26	59WC37	59WC43	59WC50	2ZYW2	2ZYW3	2ZYW4	2ZYW5	59WC38	59WC44	59WC51		
1-3/4" (45mm)	BC	8"	59WC68	59WC80	59WC86	59WC93	2ZYW6	2ZYW7	2ZYW8	2ZYW9	59WC81	59WC87	59WC94		
1-7/8" (48mm)	BC	8"	59WD11	59WD21	59WD27	59WD34	2ZYX1	2ZYX2	2ZYX3	2ZYX4	59WD22	59WD28	59WD35		
2" (51mm)	BC	8"	59WN71	59WN82	59WN88	59WN95	2ZYX5	2ZYX6	2ZYX7	2ZYX8	59WN83	59WN89	59WN96		
2-1/8" (54mm)	BC	8"	59WR30	59WR40	59WR46	59WR53	2ZXY9	2RFK2	2ZVN1	2ZYY1	59WR41	59WR47	59WR54		
2-1/4" (57mm)	BC	8"	59WP89	59WP99	59WR06	59WR13	2ZYY2	2ZYY3	2ZYY4	2ZYY5	59WR01	59WR07	59WR14		
2-3/8" (60mm)	BC	8"	59WT11	59WT21	59WT27	59WT34	2ZYY6	2ZYY7	2ZYY8	337VY6	59WT22	59WT28	59WT35		
2-1/2" (64mm)	BC	8"	59WP50	59WP60	59WP66	59WP73	2ZYZ1	2ZYZ2	2ZYZ3	2ZYZ4	59WP61	59WP67	59WP74		
2-5/8" (67mm)	BC	8"	59WT50	59WT60	59WT66	59WT73	2ZYZ5	2ZYZ6	2ZYZ7	2ZYZ8	59WT61	59WT67	59WT74		
2-3/4" (70mm)	BC	8"	59WR71	59WR81	59WR87	59WR94	2ZYZ9	2ZZA1	2ZZA2	2ZZA3	59WR82	59WR88	59WR95		
2-7/8" (73mm)	BC	8"	59WT89	59WT99	59WU06	59WU13	2ZZA4	2ZZA5	2ZZA6	2ZZA7	59WU01	59WU07	59WU14		
3" (76mm)	BC	8"	59WU29	59WU39	59WU45	59WU52	2ZZA8	2ZZA9	2ZZC1	2ZZC2	59WU40	59WU46	59WU53		
3" (76mm)	GBD	13.5"	59XV06	59XV16	59XV22	59XV29	2ZZE5	2ZZE6	2ZZE7	2ZZE8	59XV17	59XV23	59XV30		
3-1/4" (83mm)	GB	13.5"	59XT48	59XT58	59XT64	59XT71	2ZZC3	2ZZC4	2ZZC5	2ZZC6	59XT59	59XT65	59XT72		
3-1/4" (83mm)	GBD	13.5"	59XV85	59XV95	59XW02	59XW09	2ZZE9	2ZZF1	2ZZF2	337VF5	59XV96	59XW03	59XW10		
3-1/2" (89mm)	GB	13.5"	59XT09	59XT19	59XT25	59XT32	2ZZC7	2ZZC8	2ZZC9	2ZZD1	59XT20	59XT26	59XT33		
3-1/2" (89mm)	GBD	13.5"	59XV45	59XV56	59XV62	59XV69	2ZZF4	2ZZF5	2ZZF6	337VG1	59XV57	59XV63	59XV70		
3-3/4" (95mm)	GB	13.5"	59XT87	59XT98	59XU04	59XU11	337VC9	337VF7	2ZZD4	2ZZD5	59XT99	59XU05	59XU12		
3-3/4" (95mm)	GBD	13.5"	59XW25	59XW35	59XW41	59XW48	337VE0	337WE3	337VD2	337VC6	59XW36	59XW42	59XW49		
4" (101mm)	GBD	13.5"	59XW64	59XW74	59XW80	59XW87	2ZZG3	2ZZG4	2ZZG5	2ZZG6	59XW75	59XW81	59XW88		
4-1/8" (105mm)	GB	13.5"	59XU27	59XU37	59XU43	59XU50	2ZZD6	2ZZD7	2ZZD8	2ZZD9	59XU38	59XU44	59XU51		
4-1/4" (108mm)	GBD	13.5"	59XX43	59XX53	59XX59	59XX66	2ZZG7	337WD8	2ZZG9	337WD7	59XX54	59XX60	59XX67		
4-1/2" (114mm)	GBD	13.5"	59XX04	59XX14	59XX20	59XX27	2ZZH2	2ZZH3	2ZZH4	2ZZH5	59XX15	59XX21	59XX28		
4-5/8" (118mm)	GB	13.5"	59XU66	59XU76	59XU82	59XU89	2ZZE1	337WD4	337VG9	2ZZE4	59XU77	59XU83	59XU90		
5" (127mm)	GBD	13.5"	59XX82	59XX93	59XX99	59XY07	2ZZH6	2ZZH7	2ZZH8	2ZZH9	59XX94	59XY01	59XY08		
5-1/2" (140mm)	GBD	13.5"	59XY23	59XY33	59XY39	59XY46	2ZZJ1	2ZZJ2	2ZZJ3	2ZZJ4	59XY34	59XY40	59XY47		
6" (152mm)	GBD	17.5"	59XY62	59XY72	59XY78	59XY85	2ZZJ5	2ZZJ6	2ZZJ7	2ZZJ8	59XY73	59XY79	59XY86		
6-1/2" (165mm)	GBD	17.5"	59XZ04	59XZ16	59XZ22	59XZ29	59XY93	59XY98	59XZ07	59XZ12	59XZ17	59XZ23	59XZ30		
7" (178mm)	GBD	17.5"	59XZ47	59XZ59	59XZ65	59XZ72	59XZ37	59XZ42	59XZ50	59XZ55	59XZ60	59XZ66	59XZ73		
7-1/2" (190mm)	GBD	17.5"	59XZ90	59YA03	59YA09	59YA16	59XZ80	59XZ85	59XZ93	59XZ98	59YA04	59YA10	59YA17		
8" (203mm)	GBD	17.5"	59YA34	59YA46	59YA52	59YA59	59YA24	59YA29	59YA37	59YA42	59YA47	59YA53	59YA60		

* Available in sizes up to 36" in diameter. Also available in Aluminum Oxide, Boron Carbide, Z-Grain, Levigated Alumina, Diamond and CBN to tackle different materials.

AVAILABLE THROUGH

FOR MORE INFORMATION CONTACT YOUR GRAINGER REPRESENTATIVE OR VISIT GRAINGER.COM

GRAINGER

FOR THE ONES WHO GET IT DONE

FLEX-HONE®

BC STANDARD DUTY



ALUMINUM OXIDE (AO)

Ideal for aluminum, brass, bronze and softer non-ferrous materials. Order by bore size.



GBD HEAVY DUTY



GB STANDARD DUTY

GRAINGER PART NUMBERS

Bore Diameter	Series	Overall Length	GRAINGER PART NUMBERS											
			20 Grit	40 Grit	60 Grit	80 Grit	120 Grit	180 Grit	240 Grit	320 Grit	400 Grit	600 Grit	800 Grit	
4mm (.157")	BC	6"							59WX43	59WX47	59WX51	59WX56	59WX59	59WX62
4.5mm (.177")	BC	6"							59WX22	59WX26	59WX30	59WX34	59WX37	59WX40
3/16" (4.75mm)	BC	6"							59WU60	59WU64	59WU68	59WU72	59WU75	59WU78
5mm (.197")	BC	8"			59WY62	59WY69	59WY39		514H36	59WY47	59WY51	59WY56	59WY60	59WY67
5.5mm (.217")	BC	8"			59WX88	59WX95	59WX65		59WX69	59WX73	59WX77	59WX82	59WX86	59WX93
6mm (.236")	BC	8"			59WZ29	59WZ36	59WZ08		59WZ12	59WZ16	59WZ20	59WZ23	59WZ27	59WZ34
6.4mm (.250")	BC	8"			59WY96	59WZ04	59WY73		59WY77	59WY81	59WY85	59WY90	59WY94	59WZ02
7mm (.276")	BC	8"			59XA04	59XA11	59WZ80		514H38	59WZ88	59WZ92	59WZ97	59XA09	59XA09
8mm (.315")	BC	8"			59XA37	59XA44	59XA15		59XA19	59XA23	59XA27	59XA32	59XA35	59XA42
9mm (.354")	BC	8"			59XC06	59XC13	59XA82		59XA86	59XA90	59XA94	59XA99	59XC04	59XC11
9.5mm (.375")	BC	8"			59XA71	59XA78	59XA48		59XA52	59XA56	59XA60	59XA65	59XA69	59XA76
10mm (.394")	BC	8"			59WL26	59WL33	59WL03		59WL07	59WL11	59WL15	59WL20	59WL24	59WL31
11mm (.433")	BC	8"			59WL58	59WL65	59WL37		59WL40	59WL44	59WL48	59WL52	59WL56	59WL63
12mm (.472")	BC	8"			59WM33	59WM40	59WM10		59WM14	59WM18	59WM22	59WM27	59WM31	59WM38
1/2" (12.7mm)	BC	8"	59WL78	59WL92	59WL98	59WM06	59WL69		59WL73	59WL80	59WL84	59WL90	59WL96	59WM04
14mm (.552")	BC	8"	59WM53	59WM67	59WM73	59WM80	59WM44		59WM48	59WM55	59WM59	59WM65	59WM71	59WM78
5/8" (16mm)	BC	8"	59WY09	59WY23	59WY28	59WY35	59WX99		59WY04	59WY11	59WY15	59WY21	59WY26	59WY33
18mm (.709")	BC	8"	59WN32	59WN46	59WN52	59WN59	59WN23		59WN27	59WN34	59WN38	59WN44	59WN50	59WN57
3/4" (19mm)	BC	8"	59WU90	59WX05	59WX11	59WX18	59WU81		59WU85	59WU92	59WU96	59WX03	59WX09	59WX16
20mm (.787")	BC	8"	59WP13	59WP27	59WP31	59WP38	59WP04		59WP08	59WP15	59WP19	59WP25	59WP29	59WP36
7/8" (22.2mm)	BC	8"	59WZ49	59WZ63	59WZ69	59WZ76	59WZ40		59WZ44	59WZ51	59WZ55	59WZ61	59WZ67	59WZ74
15/16 (23.8mm)	BC	8"	59WM93	59WN07	59WN12	59WN19	59WM84		59WM88	59WM95	59WM99	59WN05	59WN10	59WN17
1" (25.4mm)	BC	8"	59WK72	59WK86	59WK91	59WK98	59WK63		59WK67	59WK74	59WK78	59WK84	59WK89	59WK96
1-1/8" (29mm)	BC	8"	59VZ70	59VZ83	59VZ88	59VZ95	59VZ61		59VZ65	59VZ72	59VZ76	59VZ81	59VZ86	59VZ93
1-1/4" (31.8mm)	BC	8"	59WA09	59WA23	59WA29	59WA36	59VZ99		59WA04	59WA11	59WA15	59WA21	59WA27	59WA34
1-3/8" (35mm)	BC	8"	59WA49	59WA63	59WA68	59WA75	59WA40		59WA44	59WA51	59WA55	59WA61	59WA66	59WA73
1-1/2" (38mm)	BC	8"	59WA88	59WC03	59WC07	59WC14	59WA79		59WA83	59WA90	59WA94	59WC01	59WC05	59WC12
1-5/8" (41mm)	BC	8"	59WC27	59WC41	59WC47	59WC55	59WC18		59WC22	59WC29	59WC33	59WC39	59WC45	59WC52
1-3/4" (45mm)	BC	8"	59WC69	59WC84	59WC90	59WC98	59WC59		59WC64	59WC71	59WC76	59WC82	59WC88	59WC95
1-7/8" (48mm)	BC	8"	59WD12	59WD25	59WD31	59WD38	59WD03		59WD07	59WD14	59WD18	59WD23	59WD29	59WD36
2" (51mm)	BC	8"	59WN72	59WN86	59WN92	59WN99	59WN63		59WN67	59WN74	59WN78	59WN84	59WN90	59WN97
2-1/8" (54mm)	BC	8"	59WR31	59WR44	59WR50	59WR58	59WR21		59WR26	59WR33	59WR37	59WR42	59WR48	59WR55
2-1/4" (57mm)	BC	8"	59WP90	59WR04	59WR10	59WR18	59WP82		59WP85	59WP92	59WP96	59WR02	59WR08	59WR15
2-3/8" (60mm)	BC	8"	59WT12	59WT25	59WT31	59WT38	59WT03		59WT07	59WT14	59WT18	59WT23	59WT29	59WT36
2-1/2" (64mm)	BC	8"	59WP51	59WP64	59WP70	59WP77	59WP42		59WP46	59WP53	59WP57	59WP62	59WP68	59WP75
2-5/8" (67mm)	BC	8"	59WT51	59WT64	59WT70	59WT77	59WT42		59WT46	59WT53	59WT57	59WT62	59WT68	59WT75
2-3/4" (70mm)	BC	8"	59WR72	59WR85	59WR91	59WR98	59WR62		59WR67	59WR74	59WR78	59WR83	59WR89	59WR96
2-7/8" (73mm)	BC	8"	59WT90	59WU04	59WU10	59WU17	59WT81		59WT85	59WT92	59WT96	59WU02	59WU08	59WU15
3" (76mm)	BC	8"	59WU30	59WU43	59WU49	59WU56	59WU21		59WU25	59WU32	59WU36	59WU41	59WU47	59WU54
3" (76mm)	GBD	13.5"	59XV07	59XV20	59XV26	59XV33	59XU97		59XV02	59XV09	59XV13	59XV18	59XV24	59XV31
3-1/4" (83mm)	GB	13.5"	59XT49	59XT62	59XT68	59XT75	59XT40		59XT44	59XT51	59XT55	59XT60	59XT66	59XT73
3-1/4" (83mm)	GBD	13.5"	59XV86	59XV99	59XW06	59XW13	59XV77		59XV81	59XV88	59XV92	59XV97	59XW04	59XW11
3-1/2" (89mm)	GB	13.5"	59XT10	59XT23	59XT29	59XT36	59XT01		59XT05	59XT12	59XT16	59XT21	59XT27	59XT34
3-1/2" (89mm)	GBD	13.5"	59XV46	59XV60	59XV66	59XV73	59XV37		59XV41	59XV48	59XV52	59XV58	59XV64	59XV71
3-3/4" (95mm)	GB	13.5"	59XT88	59XU03	59XU08	59XU15	59XT79		59XT83	59XT90	59XT94	59XU01	59XU06	59XU13
3-3/4" (95mm)	GBD	13.5"	59XW26	59XW39	59XW45	59XW52	59XW17		59XW21	59XW28	59XW32	59XW37	59XW43	59XW50
4" (101mm)	GBD	13.5"	59XW65	59XW78	59XW84	59XW91	59XW56		59XW60	59XW67	59XW71	59XW76	59XW82	59XW89
4-1/8" (105mm)	GB	13.5"	59XU28	59XU41	59XU47	59XU54	59XU19		59XU23	59XU30	59XU34	59XU39	59XU45	59XU52
4-1/4" (108mm)	GBD	13.5"	59XX44	59XX57	59XX63	59XX70	59XX35		59XX39	59XX46	59XX50	59XX55	59XX61	59XX68
4-1/2" (114mm)	GBD	13.5"	59XX05	59XX18	59XX24	59XX31	59XW95		59XW99	59XX07	59XX11	59XX16	59XX22	59XX29
4-5/8" (118mm)	GB	13.5"	59XU67	59XU80	59XU86	59XU93	59XU58		59XU62	59XU69	59XU73	59XU78	59XU84	59XU91
5" (127mm)	GBD	13.5"	59XX83	59XX97	59XY04	59XY11	59XX74		59XX78	59XX85	59XX89	59XX95	59XY02	59XY09
5-1/2" (140mm)	GBD	13.5"	59XY24	59XY37	59XY43	59XY50	59XY15		59XY19	59XY26	59XY30	59XY35	59XY41	59XY48
6" (152mm)	GBD	17.5"	59XY63	59XY76	59XY82	59XY89	59XY54		59XY58	59XY65	59XY69	59XY74	59XY80	59XY87
6-1/2" (165mm)	GBD	17.5"	59XZ05	59XZ20	59XZ26	59XZ33	59XY94		59XY98	59XZ08	59XZ13	59XZ18	59XZ24	59XZ31
7" (178mm)	GBD	17.5"	59XZ48	59XZ63	59XZ69	59XZ76	59XZ38		59XZ43	59XZ51	59XZ56	59XZ61	59XZ67	59XZ74
7-1/2" (190mm)	GBD	17.5"	59XZ91	59YA07	59YA13	59YA20	59XZ81		59XZ86	59XZ94	59XZ99	59YA05	59YA11	59YA18
8" (203mm)	GBD	17.5"	59YA35	59YA50	59YA56	59YA63	59YA25		59YA30	59YA38	59YA43	59YA48	59YA54	59YA61

* Available in sizes up to 36" in diameter. Also available in Silicon Carbide, Boron Carbide, Z-Grain, Levigated Alumina, Diamond and CBN to tackle different materials.

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AVAILABLE THROUGH



FOR THE ONES WHO GET IT DONE

CARBIDE RINGS



BEFORE FLEX-HONE®



AFTER FLEX-HONE®

DIAMOND FLEX-HONE®

Ideal for carbide, ceramic and hardened tool steel. We have engineered our Diamond Flex-Hone using resin bond diamond crystals that have high friability. A crystal with high friability creates self sharpening edges. The result is a tool that is free cutting with a rapid cut-rate that produces an optimal finish. Brush Research has been in the business of solving difficult finishing and deburring problems with brushing technology since 1958. You can count on Brush Research to develop innovative solutions.

A manufacturer of carbide wear rings was having difficulty achieving their required surface finish. In this instance, the Diamond Flex-Hone was used in progressively finer grits to create a near mirror finish lowering Ra from 0.7 to 0.05 µm.

QUALITY TOOLS - MADE IN USA

DIAMOND PART NUMBERS

CBN PART NUMBERS

BORE DIAMETER	OAL	DIAMOND PART NUMBERS			CBN PART NUMBERS		
		170/200 MESH	800 MESH	2500 MESH	170/200 MESH	800 MESH	2500 MESH
4MM (.157")	6"	5HXT3	337WD5	337VG7	352LN7	352LN9	352LN8
4.5MM (.177")	6"	337VX9	337WF5	337WE1	352LN4	352LN6	352LN5
3/16" (4.75MM)	6"	5HXT9	337VF1	337VD3	352LM8	352LN0	352LM9
5MM (.197")	8"	337VE8	337VD9	337VX7	352LP6	352LP8	352LP7
5.5MM (.217")	8"	337VF0	337VZ2	337VG2	352LP0	352LP2	352LP1
6MM (.236")	8"	337WD2	337VC7	337WE7	352LR2	352LR4	352LR3
6.4MM (.250")	8"	5HXV1	337VF3	337WM8	352LP9	352LR1	352LR0
7MM (.276")	8"	337WE6	337VC8	337VX8	352LR6	352LR8	352LR7
8MM (.315")	8"	5HXV7	5HXV8	5HXV9	352LR9	352LT1	352LT0
9MM (.354")	8"	337VD5	337WE5	5HXW2	352LT5	352LT7	352LT6
9.5MM (.375")	8"	337VZ4	337VE7	337WF3	352LT2	352LT4	352LT3
10MM (.394")	8"	337VE4	337WE0	337VY7	352LK1	352LK3	352LK2
11MM (.433")	8"	337VF4	337VG8	337WE2	352LK7	352LK9	352LK8
12MM (.472")	8"	337VF6	337WF6	337VC2	352LL3	352LL5	352LL4
1/2" (12.7MM)	8"	5HXX5	5HXX6	5HXX7	352LL0	352LL2	352LL1
14MM (.552")	8"	337VG0	337VG5	337VC3	352LL7	352LL9	352LL8
5/8" (16MM)	8"	337VY3	337VD0	337WF0	352LP3	352LP5	352LM1
18MM (.709")	8"	337VC5	337VF2	337WF0	352LM0	352LM2	352LM1
3/4" (19MM)	8"	5HXY7	337VE1	337VE6	352LN1	352LN3	352LN2
20MM (.787")	8"	337VG4	5HXZ1	337WE4	352LM3	352LM5	352LM4
7/8" (22.2MM)	8"	337WF7	337VE2	337WE9			
15/16" (23.8MM)	8"	337WD9	337VG6	337VF8			
1" (25.4MM)	8"	337WF2	337VZ0	337VY2			
1-1/8" (29MM)	8"	337VY4	337VY9	337WF1			
1-1/4" (31.8MM)	8"	337VE3	337VZ1	337VY8			
1-3/8" (35MM)	8"	337VD8	337VD7	337VG3			
1-1/2" (38MM)	8"	337VE9	337VF9	337VY1			

*Order by bore diameter. Other sizes available on special order. Items listed above are Grainger Part Numbers.



CBN FLEX-HONE®

Ideal for high nickel alloy steels. Nickel alloy steels, or Superalloys, offer a combination of excellent corrosion resistance, strength, toughness, metallurgical stability and weldability. They offer outstanding heat and corrosion properties making them an ideal choice for applications requiring chemical resistance and strength at elevated temperatures. The machining characteristics of these materials vary but all have properties in common which affect their machinability. Nickel alloy steels exhibit properties of high ductility and work hardening that produce a gummy machining behavior. Common suggestions include keeping cutting pressure and temperature low to avoid work hardening. **CBN Flex-Hones combines the highest hardness with excellent toughness to provide the optimum surface finish.**



* Also available in Silicon Carbide, Aluminum Oxide, Boron Carbide, Z-Grain and Levigated Alumina in 11 grits to tackle different materials.

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GRIT SELECTION

FLEX-HONE®

The amount of work to be performed and the degree of surface finish improvement required govern grit selection. Coarse finishes may require progressively finer Flex-Hones to meet final surface finish requirements. In very general terms, final finish will be in the following ranges. This chart is intended to offer a starting point in selecting a grit but the final selection must be verified by actual trial.

GRIT	FINISH RANGE
800-LA (2500 MESH)	Ra 3-10 (.05 – .2 Micrometer)
600	Ra 8-12 (.2 – .3 Micrometer)
400 (800 MESH)	Ra 10-20 (.3 – .6 Micrometer)
320	Ra 18-30 (.5 – .7 Micrometer)
240	Ra 24-32 (.6 – .8 Micrometer)
180 (170/200 MESH)	Ra 30-40 (.7 – 1.0 Micrometer)
120	Ra 35-50 (.9 – 1.4 Micrometer)
80	Ra 45-64 (1.2 – 1.6 Micrometer)
60	Ra 60-80 (1.5 – 2 Micrometer)
40	Ra 70-125 (1.7 – 3.2 Micrometer)
20	Ra 125-250 (3.2 – 6.3 Micrometer)

Grit Type

Color Marked on Tip of Hone

ABRASIVE/GRIT OPTIONS

GRIT SIZES

ABRASIVE TYPES	20	40	60	80	120	180	240	320	400	600	800
SC = Silicon Carbide	X	X	X	X	STANDARD			X	X	X	
AO = Aluminum Oxide	X	X	X	X	X	X	X	X	X	X	X
BC = Boron Carbide	X	X	X	X	X	X	X	X	X	X	X
Z Grain - Alumina Zirconia No. 1525 (25% Zirconia/75% Alumina)			X	X	X	X	X				
Z Grain - Alumina Zirconia No. 1549 (40% Zirconia/60% Alumina)					X	X	X				
Diamond	Diamond is available in mesh 170/200, 800 and 2500										
Levigated Alumina	Available in extra fine grit only										
CBN	Available in mesh 170/200, 800, 2500										
Ceramic	Available on special order										

SUGGESTED RPM

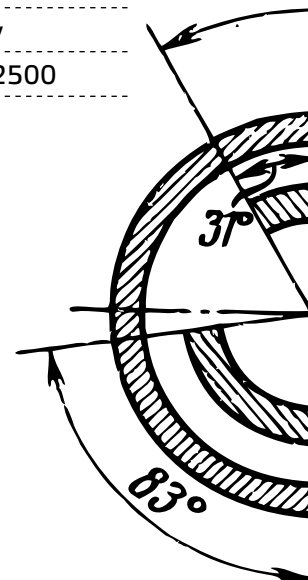
The Flex-Hone Tool is a low RPM tool. Specific RPM is dependent on the diameter of the tool and the application. General speed ranges are given but, again, machine trials are required to verify the parameters.

The smaller the hone, the faster the speed.
The larger the hone, the slower the speed.

HONE DIA.

RPM

Hone Dia.	RPM
19" to 36"	60 – 120 RPM
12" to 18"	125 – 200 RPM
8" to 11"	225 – 300 RPM
4" to 7 ½"	350 – 600 RPM
2" to 3 ¾"	600 – 900 RPM
½" to 2"	900 – 1,000 RPM
4mm to ½"	1,000 – 1,200 RPM



***Additional sizes (4mm-36"), abrasives and grits sold individually upon request.**

The Flex-Hone Tool should be securely held in a collet, chuck, or similar holding device. It is best to use the shortest shank possible for your application. The tool should be well coated with lubricant and rotating prior to entry and should continue rotating until fully removed from the part. When deburring cross drilled holes using the Flex-Hone, it is helpful to first stroke and rotate the tool in a clockwise direction and then remove the tool from the bore, reverse the spindle and then stroke and rotate in a counterclockwise direction. This promotes a symmetrical deburring pattern.

AVAILABLE THROUGH

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