

BG50 BOILER GUN

PIPE RANGE: 1.000 - 5.562 in (25.4 - 141.3 mm)

04 | 2019
BG50

The **BG50 BOILER GUN** is a combination of power, versatility, and ease of use in a compact and lightweight package. Designed to perform on-site machining on boiler tubes or other pipe applications with speed and accuracy, delivering the optimal speed and torque combination to make short work of your tube prep projects.



POWERFUL PERFORMANCE

Powerful drive motors make quick work of light-wall tubing and provide the torque needed for heavy-wall alloy tubes.

Multiple RPM ranges available with high-velocity (HV), low-velocity (LV), and electric (E) to cover a wide range of applications.

Heavy duty gearset increases machine longevity and provides the torque and speed required to perform a wide variety of end prep work.

Heavy duty tapered roller bearings for very rigid and smooth operation.

VERSATILITY

Pneumatic and Electric motor options allow for machine use in any environment or facility.

Two different locking systems available - Collet or Wedge, giving you the best clamping capability for any application.

Enhanced wedge design with an integrated wedge system and captured retaining springs allows quick change of wedge extensions and prevents loss of spring

Anchor Grip™ collet system provides superior gripping for applications such as stub removal, light wall tubing that cannot be deformed and tubing that cannot be contaminated with falling debris.

'Speed Wheel' allows wedge expansion using a star-wheel, which is faster in confined spaces.

Both fixed and sliding tool holders available allowing you to use the right tooling for each application.

Flange Facing attachment option quickly turns machine into flange facer with automatic radial feed.

Elbow mandrels accurately center and firmly lock the tool in place in pipe elbows or any application down 0.5 inch (12.7 mm) minimum depth.

Corrosion resistant finish applied to all external components prevents machine weathering and extends the life of the components.

EASY TO USE

Crank feed allows for a fast and consistent feed for tough applications such as fin removal or for production.

Comfort grip handle allows for convenient transport and setup from job to job.

Finer feed screws make it easier to advance the feed, putting less burden on the operator and the machine.

Drop Swivel Air Fittings extend the life of the machine by reducing hose kinks and damage.

Air Lock option dramatically saves time on high-volume jobs by locking and unlocking the tool instantly with the flip of a valve.

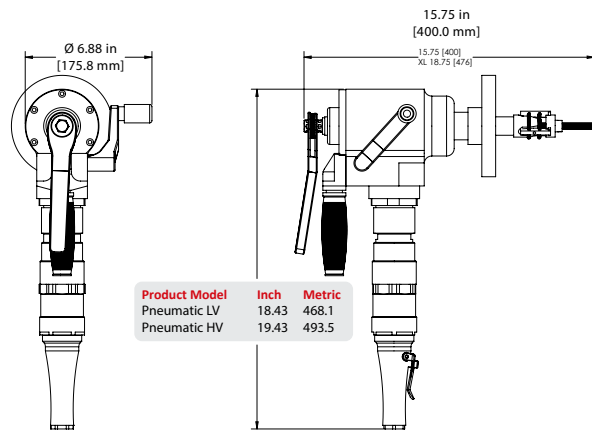
Heavy-duty storage case with foam inserts protects the machine from damage on-site or in transit.

SPECIFICATIONS

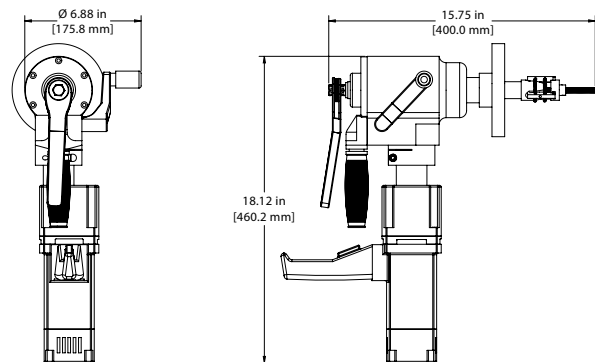


	Pneumatic LV	Pneumatic HV	Electric
Machine Performance Ranges			
Working range	1.0 - 5.562 in (25.4 - 141.3 mm)	1.0 - 5.0 in (25.4 - 127.0 mm)	1.0 - 5.0 in (25.4 - 127.0 mm)
Radial tool clearance	2.75 in (69.8 mm)	2.75 in (69.8 mm)	2.75 in (69.8 mm)
Head width	4.0 in (101.6 mm)	4.0 in (101.6 mm)	4.0 in (101.6 mm)
Travel	1.25 in (31.8 mm)	1.25 in (31.8 mm)	1.25 in (31.8 mm)
Drive System			
Motor	1.3 hp (0.97 kw)	1.3 hp (0.97 kw)	1.5 hp (1.1 kw)
Recommended air pressure	90 psi (6.1 bar)	90 psi (6.1 bar)	N/A
Recommended volume	38 cfm (1.1m3/min)	38 cfm (1.1m3/min)	N/A
Speed	55 rpm	100 rpm	98/176 rpm
Measures			
Machine weight	32.0 lbs (14.5 kg)	30.0 lbs (13.6 kg)	31.0 lbs (14.1 kg)
Shipping weight	59.0 lbs (26.7 kg)	57.0 lbs (25.8 kg)	58.0 lbs (26.3 kg)
Dimensions			
Length (L x W x H)	Refer to dimensional drawing below		
Crate dimensions (L x W x H)	23 x 19 x 7 in (584.2 x 482.6 x 177.8 mm)		

DIMENSIONAL DRAWING



Pneumatic Motor



Electric Motor

H&S APPLICATIONS

The Boiler Guns are used by these industries

- Power Generation
- Fossil-Fuel Power Stations
- Gas Turbine Power Plants
- Pulp and Paper Plants
- Chemical Processing Plants
- Oil Refineries
- Ship Yards
- Water and Wastewater Treatment

Typical Applications

- Boiler tube repair
- Stud removal
- Pipe lines
- Seal weld removal

All dimensions should be considered reference. Contact your H&S TOOL Representative for precision dimensions. Specifications are subject to change without notice. Actual results for test data may vary depending on setup, machining conditions and machine maintenance. There are no systems or components on this machine that are capable of producing hazardous EMC, UV or other radiation hazards. The machine does not use lasers nor does it create hazardous materials such as gasses or dust.

TOOL CONFIGURATION

To order your **BG50 BOILER GUN**, simply select from the options below.

To configure your machine, please follow these steps.

1. Select base model
2. Select mounting system
3. Select tool holder
4. Select optional tool holder bits

1. Base model

Pneumatic motor units *include: pneumatic motor, crank feed, hose with oiler, filter & swivel, tool kit, operator manual and storage case.*

HV Pneumatic 100 RPM motor	HS-BG50LV-R
LV Pneumatic 55 RPM motor	HS-BG50HV-R

Electric motor units *include: electric motor, crank feed, tool kit, operator manual and storage case.*

110V Electric, 0 - 270 RPM motor	HS-BG50E110-R
220V Electric, 0 - 270 RPM motor	HS-BG50E220-R

2. Mounting system

Includes center shafts, draw rod, and wedges or collets for full range

For use with Electric or HV Pneumatic Drive

Wedge set, 1 - 4.835 in (25.4 - 122.8 mm)	HS-BG50HVVSET
Collet set, 1 - 5 in (25.4 - 127 mm)	HS-BG50HVCSET

For use with LV Pneumatic Drive

Wedge set, 1 - 5.235 in (25.4 - 133 mm)	HS-BG50LVVSET
Collet set, 1 - 5.375 in (25.4 - 136.5 mm)	HS-BG50LVCSET

3. Tool holder

Sliding tool holders, 5.5 in (139.7 mm)	HS-RPMS004283
Fixed tool holders, 5.5 in (139.7 mm)	HS-RPMS004282

4. Tool holder bits (optional)

Sliding Tool Holder Bits	
S-37 Blade, 1/2 inch (12.7 mm)	HS-BLS37
- wide 37° bevel	
S-37 Wide Blade, 3/4 inch (19.1 mm)	HS-BLS37W
- wide 37° bevel	
SF Blade, 1/2 inch (12.7 mm)	HS-BLSF
- wide facing/0° bevel	
SF Wide Blade, 3/4 inch (19.1 mm)	HS-BLSFW
- wide facing/0° bevel	
SI-10 Blade, 1/2 inch (12.7 mm)	HS-BLSI
- wide 10° ID counter bore	
SI-10 Wide Blade, 3/4 inch (19.1 mm)	HS-BLSIW
- wide 10° ID counter bore	
Fixed Tool Holder Bits	
D-Blade, left offset 37° bevel	HS-BLD
C-Blade, right offset 37° bevel	HS-BLC
FL-Blade, left offset facing/0° bevel	HS-BLFL
FR-Blade, right offset facing/0° bevel	HS-BLFR
I-Blade, standard 10° ID counter bore	HS-BLI
HR-Blade, small ID 10° ID counter bore	HS-BLHR



The **BG50 BOILER GUN'S** enhanced wedge design comes with an integrated wedge system and captured retaining springs which allows for quick change of wedge extensions and prevents loss of spring.



Everything you need comes complete in a custom designed shipping container.



Sliding tool holder



Fixed tool holder

Attachments

Air Lok for crank feed
Mechanical depth stop for Crank feed

Standard collet system

Centershaf collet 1 in (25.4mm)
Centershaf collet 1-1/4 in (31.8mm)
Collet rod, 1 in (25.4mm)
Collet rod, 1-1/4 in (31.8mm)
Collet, 1 in (25.4mm)
Collet, 1-1/8 in (28.6mm)
Collet, 1-1/4 in (31.6 mm)
Collet, 1-3/8 in (34.9 mm)
Collet, 1-1/2 in (38.1 mm)
Collet, 1-5/8 in (41.3 mm)
Collet, 1-3/4 in (44.5 mm)
Collet, 1-7/8 in (47.6 mm)
Collet, 2 in (50.8 mm)
Collet, 2-1/8 in (54 mm)
Collet, 2-1/4 in (57.2 mm)
Collet, 2-3/8 in (60.3 mm)
Collet, 2-1/2 in (63.5 mm)
Collet, 2-5/8 in (66.7 mm)
Collet, 2-3/4 in (69.9 mm)
Collet, 2-7/8 in (73 mm)
Collet, 3 in (76.2mm)
Collet, 3-1/8 in (79.4mm)
Collet, 3-1/4 in (82.6mm)
Collet, 3-3/8 in (85.7mm)
Collet, 3-1/2 in (88.9mm)
Collet, 3-5/8 in (92.1mm)
Collet, 3-3/4 in (95.3mm)
Collet, 3-7/8 in (98.4mm)
Collet, 4 in (101.6mm)
Collet, 4-1/8 in (104.8mm)
Collet, 4-1/4 in (108.0mm)
Collet, 4-3/8 in (111.1mm)
Collet, 4-1/2 in (114.3mm)
Collet, 4-5/8 in (117.5mm)
Collet, 4-3/4 in (120.7mm)
Collet, 4-7/8 in (123.8mm)
Collet, 5 in (127.0mm)
Collet, 5-1/8 in (130.2mm)
Collet, 5-1/4 in (133.4mm)

HS-AL
HS-BLGAU

HS-RPMS004240
HS-RPMS004244
HS-RPMS004250
HS-RPMS004250
HS-MC1
S-MC1-18
HS-MC1-14
HS-MC1-38
HS-MC1-12
HS-MC1-58
HS-MC1-34
HS-MC1-78
HS-MC2
HS-MC2-18
HS-MC2-14
HS-MC2-38
HS-MC2-12
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HS-MC3-78
HS-MC4
HS-MC4-18
HS-MC4-14
HS-MC4-38
HS-MC4-12
HS-MC4-58
HS-MC4-34
HS-MC4-78
HS-MC5
HS-MC5-18
HS-MC5-14

Standard wedge mounting system

Standard centershaf wedge HS-RPMS004242
- 1.000 in (25.4 mm), Length = 11.875 in (301.6 mm)
Standard wedge guide & rod HS-RPMS004252
- 1.000 in (25.4 mm), Length = 15.5 in (393.7 mm)
Long centershaf wedge HS-RPMS004242L
- 1.000 in (25.4 mm), Length = 14.875 in (454.0 mm)
Long wedge guide & rod HS-RPMS004252L
- 1.000 in (25.4 mm), Length = 18.5 in (469.9 mm)
Standard centershaf wedge HS-100255
- 1.200 in (30.5mm), Length = 11.875 in (301.6 mm)
Standard wedge guide & rod HS-100257
- 1.200 in (30.5mm), Length = 15.5 in (393.7 mm)
Long centershaf wedge HS-100256
- 1.200 in (30.5mm), Length = 14.875 in (454.0 mm)
Long wedge guide & rod HS-100258
- 1.200 in (30.5mm), Length = 18.5 in (469.9 mm)
Speed Wheel (for wedge set) HS-100211

Centershaf		Wedge Set	ID Range		PN	Wedge Guide	
Inch	MM		Inch	MM		Inch	MM
1.000	25.4	M-1.000	1.000 - 1.250	25.4 - 31.8	HS-100216	0.875	22.2
1.200	30.5	M-01	1.222 - 1.635	31.0 - 41.5	HS-100221	1.200	30.5
		M-02	1.622 - 2.035	41.2 - 51.7	HS-100222		
Centershaf		Wedge Extension	ID Range		PN	Wedge Guide	
Inch	MM	Requires M-04	Inch	MM		Inch	MM
1.200	30.5	M-03+M-02	2.022 - 2.435	51.4 - 61.9	HS-100226	1.200	30.5
		M-04+M-02	2.422 - 2.835	61.5 - 72.0	HS-100227		
		M-05+M-02	2.822 - 3.235	71.7 - 82.2	HS-100228		
		M-06+M-02	3.222 - 3.635	81.8 - 92.3	HS-100229		
		M-07+M-02	3.622 - 4.035	92.0 - 102.5	HS-100230		
		M-08+M-02	4.022 - 4.435	102.2 - 112.6	HS-100231		
		M-09+M-02	4.422 - 4.835	112.3 - 122.8	HS-100232		
		M-10+M-02	4.822 - 5.235	122.4 - 132.9	HS-100233		



Wedge set

Sliding tool holder carbide insert holders

S-37 Insert Holder, 37° bevel HS-INSH
SF Insert Holder, facing/0° bevel HS-INSHSF
Carbide J-bevel insert HS-INSJ

Hand Hole Cap Removal

Threaded centershaf 1/2 in (12.7 mm) HS MSTHSH1
Threaded centershaf 5/8 in (15.9 mm) HS MSTHSH1/2
Threaded centershaf 3/4 in (19.1 mm) HS MSTHSH3/4
Threaded centershaf 7/8 in (22.2 mm) HS MSTHSH7/8
Threaded centershaf 1 in (25.4 mm) HS MSTHSH1



Collet set

Multi-Prep Fin Removal, diamond insert required

(removes fin only, does not bevel)

Deep fin removal head MS/FC - 2 in OD x 3 in (50.8 x 76.2 mm)	HS-MS/FC-2X3
Deep fin removal head MS/FC - 2 in OD x 4 in (50.8 x 101.6 mm)	HS-MX/FC-2X4

Multi-Prep Fin Removal, diamond & triangular insert required *(removes fin and bevels)*

Fin Removal Head - 1-1/2 in OD x 3 in depth (38.1 x 76.2 mm)	HS-MSMPF1.5x3
Fin Removal Head - 2 in OD x 2 in depth (50.8 x 50.8 mm)	HS-MPF2X2
Fin Removal Head - 2.5 in OD x 3 in depth (63.5 x 76.2 mm)	HS-MSF2.125X3

Tooling

Carbide insert, diamond	HS-INSFF
Carbide insert, Triangular - bevel head, 3° x 37°	HS-INS12N

Multi-Prep.

Fin Removal

Make fin removal easier and faster with the Multi-Prep Fin Removal Head featuring replaceable carbide inserts



that will remove up to 3 inches (76.2 mm) of fins and machine a bevel on the tube end in one operation. Fin removal only is also available.

Flange Facer Attachment

Expand the BG50 capability with the Flange Facer Attachment. The light weight design makes it easy to handle with a single operator while the high torque motor and patented gear sets deliver power and reliability.

Versatile Working Range

Two inserts holders (low and high range) are provided to cover the full working range. These ensure the most compact package possible for working in tight areas.

Precision Controls

The BG50 Flange Facer produces surface finishes from record-groove (500 RMS) to smooth 63 RMS. This is controlled with 6 individual trip pins with each trip pin advancing the tool .005 in (.125 mm) per revolution. A maximum of .031 in (.787 mm) per revolution is accomplished with all six pins engaged. The convenient crank feed produces a .083 in (2.1 mm) axial travel per handle revolution. This allows the operator to accurately set the depth of cut to remove a minimum amount of material.

The variable speed control valve assures maximum efficiency and surface finish.



Quality Tooling

Raised-face surface machining is accomplished with replaceable carbide insert tooling for reliable accuracy. For machining bolt hole patterns on raised-face or performing full resurfacing on flat-faced flanges, high quality, re-sharpenable tool steel tooling is recommended.

Elbow Mandrels

The accuracy to perform all of your critical tube machining projects is achieved with our elbow mandrels.

These mandrels accurately center and firmly lock our beveling tools in place to bevel, square and perform other end machining on elbows. They lock securely even in short-radius elbows with only a .500 in (12.7 mm) minimum depth.

The elbow mandrels can be used for all flange facing applications starting at 1.750 in (44.5 mm) ID.

Flange facing accessories *(for LV pneumatic drive only)*

Flange Facing Attachment	HS-MSFF-R
Flange Facing Insert	HS-INSFF
Elbow Mandrel	HS-RPMSEM004409

A Fast Three-Step Process

Ready to bevel in 7 minutes or less!

1

WEDGE SYSTEM

Thread the base wedge set onto the locking rod and install extensions as required. Install the locking rod wrench and nut on the locking rod.

or

COLLET SYSTEM

Slide the locking rod through the center shaft. Thread the required collet set onto the locking rod and install the cotter pin in the end of the locking rod end.



2

Mount the machine on the work piece. Be aware of the position of locking system in the work piece; allow approximately 1/2" (12.7mm) of material for machining. Tighten the locking system by turning the locking rod wrench.



3

Install the blades in the tool holder 180° apart. Position the blades for cutting by turning the crank handle.



TRAINING FACILITIES



CLIMAX | H&S TOOL has been teaching the fundamentals and fine points of portable machine tool operation for practically as long as we've been inventing and building the tools.

We offer training facilities in the United States - the Global Learning Center, situated in our corporate headquarters near Portland, Oregon and our Houston, Texas Training Facility. Both facilities offer training for machine tool operators on safety and machine setup and operation. Trainees also receive technical tips and tools to improve operational efficiencies, with the vast majority of every program devoted to hands-on activities and skill development.



The CLIMAX | H&S TOOL instructional team includes specialists in shipbuilding, power generation, civil engineering, bridge re-building, petrochemical and other industries.

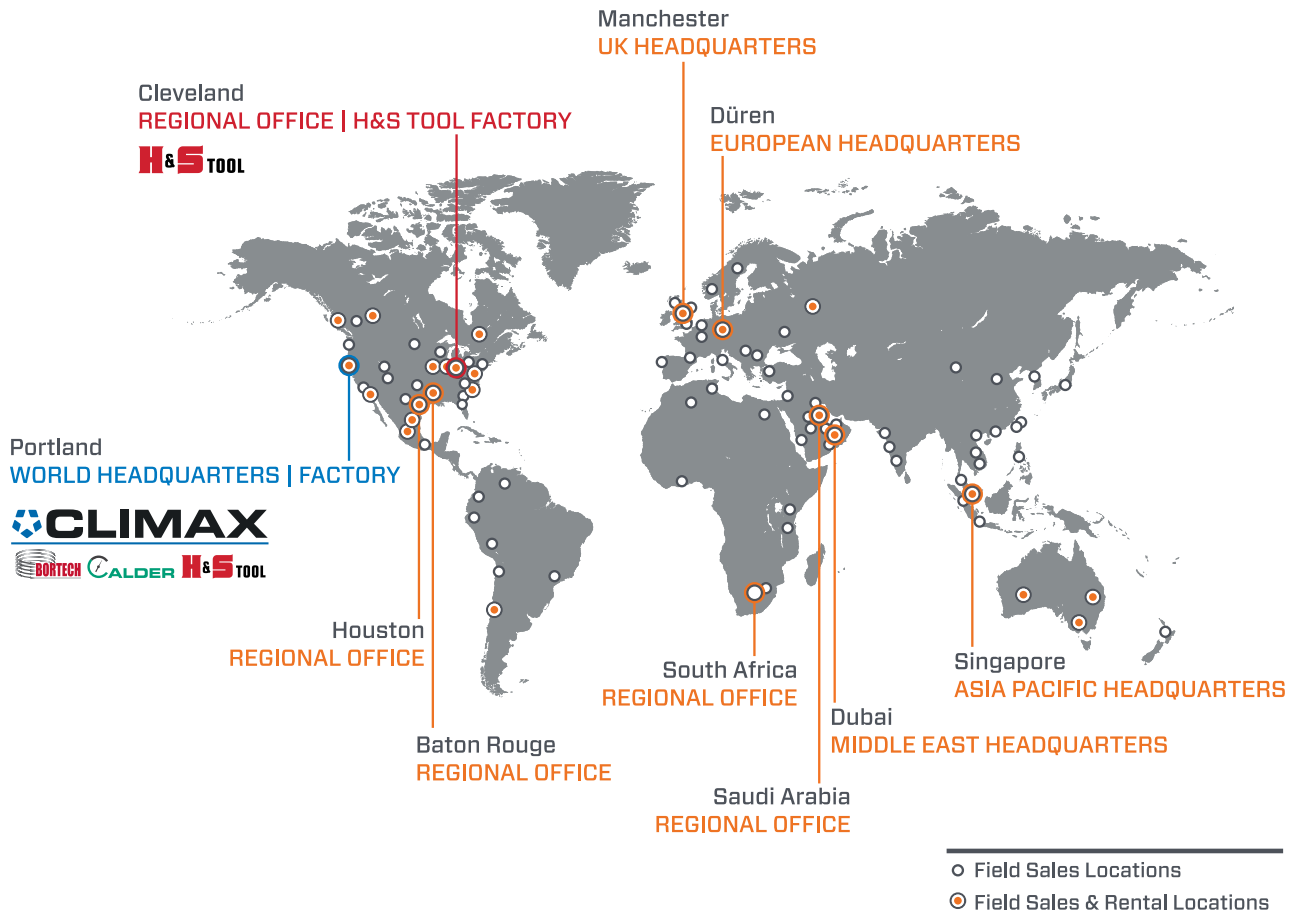
Whether it's a regularly scheduled course at one of our training facilities, or custom curriculum conducted at your facility, your machinists will benefit from courses developed by some of the most respected authorities in the business.

Call us today to register for a regularly scheduled class, or talk to us about how we can customize a training program for your specialized application.



Wadsworth, Ohio Facility

GLOBAL LOCATIONS



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