

TENNSMITH®  **USA**

Sheet Metal Machinery



Proudly made in the USA

AN AMERICAN TRADITION

TENNSMITH®

A Family Tradition

Ray Smith, Sr., and sons, Ray Smith, Jr., and W. Douglas Smith, founded the business, first known as Smith Machine Tool Company in McMinnville, Tennessee. Ray, Sr., and his brothers were the owners and managers of Powermatic, the McMinnville-based manufacturer of wood and metalworking machinery, which was established by their father, Leonard F. Smith, Sr., back in 1928. Smith Machine Tool Co. was later reincorporated as TENNSMITH, INC.

All TENNSMITH products are built in the USA, backed by an industry-leading 3-year limited warranty.

Today, the Smith family continues to build upon eight decades of manufacturing excellence with TENNSMITH

American-made metal

forming machinery. TENNSMITH has developed a full range of sheet metal tools including Automatic Folders, Hand Brakes, Shears, Slip Rolls, Cleat Benders, Notchers and Rotary Machines. The company is recognized worldwide as a premier leader in the manufacture of sheet metal fabricating machinery. All TENNSMITH products are

built in the USA. Our 100,000-square-foot manufacturing facility is well equipped with the very latest in machine tool technology.



Inside Smith Machine Shop (Powermatic), early 1940s.

and customer satisfaction are the key ingredients of maintaining our future growth. If you have suggestions, opinions or ideas that will help us improve our products, we would enjoy hearing from you.

TENNSMITH machinery is backed by an industry leading 3-year limited warranty.

Quality workmanship, product performance



*Proudly Made in the USA
A Family Tradition Since 1928 .*

BRAKES



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HEAVY-DUTY HAND BRAKES

HB
series



MODELS

HB48-12
HB73-16
HB97-18
HB97-16
HB97-12



Model HB97-16

TENNSMITH's heavy-duty hand brakes are designed and built for long service and accurate bending. Welded steel plate construction and heavy truss rods and braces provide strength and durability.

With much more substantial steel side plates than other domestically made units, these brakes have the rigidity required for upper beam adjustment without the use of wrenches.

Equipped with thrust bearings, the upper leaf adjustment screws permit quick, accurate alignment for different material thicknesses or radii.

Heavy-Duty Hand Brakes	HB48-12	HB73-16	HB97-18	HB97-16	HB97-12
Capacity, mild steel	12 gauge/2.7 mm	16 gauge/1.6 mm	18 gauge/1.25 mm	16 gauge/1.6 mm	12 gauge/2.7 mm
Bending length	49 in./1245 mm	73 in./1854 mm	97 in./2464 mm	97 in./2464 mm	97 in./2464 mm
Maximum lift of beam	1-7/8 in./47 mm	1-7/8 in./47 mm	1-7/8 in./47 mm	1-7/8 in./47 mm	2-1/4 in./57 mm
Front to rear beam adjustment	1/2 in./13 mm	1/2 in./13 mm	1/2 in./13 mm	1/2 in./13 mm	1/2 in./13 mm
Minimum reverse bend	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm	1 in./25 mm	1 in./25 mm	1 in./25 mm
Dimensions, counterweights in place, LxWxH	72 x 36 x 53 in. 1829 x 915 x 1346 mm	114 x 48 x 59-1/2 in. 2896 x 1220 x 1512 mm	138 x 48 x 59-1/2 in. 3506 x 1220 x 1512 mm	140 x 52 x 60 in. 3556 x 1321 x 1524 mm	145 x 54 x 63-1/2 in. 3683 x 1372 x 1613 mm
Shipping weight	1100 lbs./500 kg	1200 lbs./545 kg	1385 lbs./628 kg	1675 lbs./759.8 kg	2800 lbs./1273 kg



Model HB121-16

HEAVY-DUTY HAND BRAKES

MODELS

HB121-18
HB121-16
HB121-14
HB145-18

HB
series



Other adjustment features include:

- Leveling screws and lock nuts on the pedestals
- Jack screws and tensioner bolts on the apron
- Truss rods on the apron, base and upper beam
- Fully adjustable counter balances to facilitate the bending process
- Replaceable nose bar and apron inserts

Removable apron angle and insert permit 1/4-inch reverse bends in lighter material.

Bored in line to ensure perfect alignment, the pivot points are fitted with oil impregnated bearings. The hinge pins are high-tensile, alloy steel.

Ductile steel clamp handles, heavy yokes, grease fittings and an apron stop rod complement the many other fine features of these heavy-duty brakes.

<i>Heavy-Duty Hand Brakes</i>	<i>HB121-18</i>	<i>HB121-16</i>	<i>HB121-14</i>	<i>HB145-18</i>
Capacity, mild steel	18 gauge/1.25 mm	16 gauge/1.6 mm	14 gauge/2.0 mm	18 gauge/1.25 mm
Bending length	121 in./3073 mm	121 in./3073 mm	121 in./3073 mm	145 in./3683 mm
Maximum lift of beam	1-7/8 in./47 mm	2-1/4 in./57 mm	2-1/4 in./57 mm	2-1/4 in./57 mm
Front to rear beam adjustment	1/2 in./13 mm	1/2 in./13 mm	1/2 in./13 mm	1/2 in./13 mm
Minimum reverse bend	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm	1 in./25 mm	1 in./25 mm
Dimensions, counterweights in place, LxWxH	159 x 52 x 60 in. 4039 x 1321 x 1524 mm	161 x 53 x 59-1/2 in. 4090 x 1347 x 1512 mm	162 x 54 x 63-1/2 in. 4115 x 1372 x 1613 mm	185 x 53 x 59-1/2 in. 4700 x 1347 x 1512 mm
Shipping weight	2300 lbs./1043 kg	2875 lbs./1304 kg	3250 lbs./1477 kg	3400 lbs./1545 kg

CONNECTICUT BENDING BRAKES

CT
series



MODELS

816
1018
1016



Model 1018

Connecticut
SERIES

Connecticut Series floor-mounted manual bending brakes are precision machines designed for accurate bending within rated capacities.

Features of the Connecticut Bending Brake:

- Positive clamping pressure adjustment
- Apron stop rod for repeat bends
- Long handles for extra leverage
- Work support angle bar for full capacity
- 1-inch minimum flange
- Improved leg design for lighter weight
- All-steel construction

- Heavy tie rods for minimum deflection
- Removable bending bar and angle
- Adjustable apron hinges
- Positive rear material gauge adjustment

Connecticut Series hand brakes are an economically-priced solution for your bending needs and will provide years of trouble-free service.

<i>Straight Bending Brakes</i>	816	1018	1016
Capacity with bending bar/angle in place, mild steel—1" Flange	16 gauge/1.60 mm	18 gauge/1.25 mm	16 gauge/1.60 mm
Capacity with bending angle removed, mild steel—1" Flange	20 gauge/1.00 mm	22 gauge/.76 mm	20 gauge/1.0 mm
Capacity with bending bar/angle removed, mild steel—1" Flange	24 gauge/0.61 mm	26 gauge/0.5 mm	24 gauge/0.61 mm
Bending length	97 in./2464 mm	121 in./3073 mm	121 in./3073 mm
Maximum lift of beam	1-5/8 in./41 mm	2-1/4 in./57 mm	2-1/4 in./57 mm
Front to rear beam adjustment	1-1/8 in./28.5 mm	1-1/8 in./28.5 mm	1-3/8 in./35 mm
Minimum reverse bend (bar and angle removed)	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm	1 in./25 mm
Dimensions, counterweights in place, LxWxH	140 x 52 x 60 in. 3556 x 1321 x 1524 mm	159 x 52 x 60 in. 4039 x 1321 x 1524 mm	161 x 53 x 60 in. 4090 x 1347 x 1512 mm
Shipping weight	1640 lbs./745 kg	2200 lbs./1000 kg	2660 lbs./1200 kg



Model U412-6

Connecticut
SERIES

CONNECTICUT BENDING BRAKES

MODELS

U 4 1 2 - 6

U 6 1 6 - 6

CT
series



Connecticut Series floor-mounted manual bending brakes are precision machines designed for accurate bending within rated capacities. Features of the Connecticut Box and Pan Bending Brake:

- 6-inch depth of box capacity
- Positive clamping pressure adjustment
- Apron stop rod for repeat bends
- Replaceable bushings and hinge pin
- Long handles for extra leverage
- Work support angle bar for full capacity 1-inch minimum flange
- Improved leg design for lighter weight
- All-steel construction

- Heavy tie rods for minimum deflection
- Removable bending bar and angle
- Adjustable apron hinges
- Positive rear material gauge adjustment

Connecticut Series box and pan brakes are an economically-priced solution for your bending needs and will provide years of trouble-free service.

<i>Box and Pan Bending Brakes</i>	<i>U412-6</i>	<i>U616-6</i>
Capacity with bending bar/angle in place, mild steel—1" Flange	12 gauge/2.6 mm	16 gauge/1.6 mm
Capacity with bending angle removed, mild steel—1" Flange	16 gauge/1.6 mm	20 gauge/1.0 mm
Capacity with bending bar/angle removed, mild steel—1" Flange	18 gauge/1.25 mm	24 gauge/.61 mm
Bending length	48 in./1220 mm	72 in./1830 mm
Maximum lift of beam	1-5/8 in./41 mm	1-5/8 in./41 mm
Front to rear beam adjustment	1-1/8 in./28.5 mm	1-1/8 in./28.5 mm
Minimum reverse bend (bar and angle removed)	1/4in./6 mm	1/4in./6 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm
Dimensions, counterweights in place, LxWxH	72 x 48 x 72 in. 1829 x 1219 x 1829 mm	96 x 48 x 72 in. 2439 x 1219 x 1829 mm
Shipping weight	1600 lbs./730 kg	1800 lbs./820 kg

HBU series

HBU48-12
HBU72-16



Model HBU48-12

The removable fingers are case hardened for long service. TENNSMITH's box and pan hand brake is a productive addition to any shop doing prototype or design work, fabrication or short run production in heavier materials.

Box & Pan Hand Brakes	HBU48-12	HBU72-16
Capacity, mild steel	12 gauge/2.7 mm	16 gauge/1.6 mm
Capacity, stainless steel	16 gauge/1.6 mm	20 gauge/1.0 mm
Bending length	48-1/4 in./1225 mm	72 in./1829 mm
Maximum lift of beam	1-1/2 in./38.1 mm	1-1/2 in./38.1 mm
Front to rear beam adjustment	1 in./25 mm	1 in./25 mm
Maximum depth of box	4 in./101.6 mm	4 in./101.6 mm
Maximum reverse bend	1/4 in./6 mm	1/4 in./6 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm
Finger widths	2, 3 and 4 in. 51, 76 and 101 mm	2, 3 and 4 in. 51, 76 and 101 mm
Dimensions, counterweights in place, LxWxH	72 x 36 x 53 in. 1829 x 915 x 1346 mm	96 x 36 x 53 in. 2438 x 915 x 1346 mm
Shipping weight	1330 lbs./603.3 kg	1700 lbs./772 kg

Available option: Radius fingers.



Model F6-48-12

BOX & PAN HAND BRAKES

MODELS

F6-48-12

F6-72-12

F6-96-12

F6-120-14

F6 series



Finger Assortments

Model F6	Number of Fingers			Total
	3"W	4"W	5"W	
48-12	4	4	4	12
72-12	6	6	6	18
96-12	8	8	8	24
120-14	10	10	10	30

TENNSMITH's F6 Series box and pan brakes were designed to provide heavy-duty forming capability, along with the flexibility of removable 6-inch box depth fingers. Ample clamping and easy-to-use nose bar adjustments allow for a quick-setting bend radius. Welded steel plate construction and heavy truss rods and braces provide strength and rigidity.

Other adjustment features include:

- Leveling screws and lock nuts on the pedestals
- Jack screws and tensioner bolts on the apron
- Truss rods on the apron, base and upper beam
- Fully adjustable counter balances to facilitate the bending process
- Removable apron angle and insert permit 1/4-inch reverse bends in lighter material

Box & Pan Hand Brakes	F6-48-12	F6-72-12	F6-96-12	F6-120-14
Capacity, mild steel	12 gauge/2.7 mm	12 gauge/2.7 mm	12 gauge/2.7 mm	14 gauge/2.0 mm
Capacity, stainless steel	16 gauge/1.6 mm	16 gauge/1.6 mm	16 gauge/1.6 mm	18 gauge/1.25 mm
Bending length	48 in./1220 mm	72 in./1829 mm	96 in./2464 mm	120 in./3048 mm
Maximum lift of beam	1-1/2 in./38.1 mm	2-1/4 in./57 mm	2-1/4 in./57 mm	2-1/4 in./57 mm
Front to rear beam adjustment	1/2 in./12.7 mm	1/2 in./12.7 mm	1/2 in./12.7 mm	1/2 in./12.7 mm
Maximum depth of box	6 in./152.4 mm	6 in./152.4 mm	6 in./152.4 mm	6 in./152.4 mm
Minimum reverse bend	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm	1/4 in./6 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm	1 in./25 mm	1 in./25 mm
Finger widths	3, 4 and 5 in. 76.3, 101.6 and 127 mm	3, 4 and 5 in. 76.3, 101.6 and 127 mm	3, 4 and 5 in. 76.3, 101.6 and 127 mm	3, 4 and 5 in. 76.3, 101.6 and 127 mm
Dimensions, counterweights in place, LxWxH	72 x 49 x 56 in. 1829 x 1245 x 1425 mm	110 x 53 x 60 in. 2794 x 1347 x 1524 mm	137 x 53 x 60 in. 3480 x 1347 x 1524 mm	161 x 53 x 60 in. 4090 x 1347 x 1524 mm
Shipping weight	1725 lbs./783 kg	2825 lbs./1282 kg	3250 lbs./1475 kg	3675 lbs./1670 kg

Available options: Radius fingers; extension fingers (right and left extension fingers form inside corners with a return flange across the top on boxes, cabinets, etc.); open end fingers (provide triangular, square and rectangular tube forming abilities). Ask dealer for more details.

UNIVERSAL HAND BRAKES

HBT
series

MODELS
HBT48-12
HBT72-16



Sample bends achieved with HBT72-16.



Model HBT72-16



TENNSMITH's HBT72-16 is designed to provide forming capabilities for complex parts. This machine is truly a universal hand brake, which allows for the removal of both upper and lower segments of fingers. Complex parts, such as

HVAC transverse duct forming and down flanged parts, as well as architectural sheet metal and signage applications, can easily be formed using this machine.

The HBT72-16 is built with the same high-quality features and standards that TENNSMITH brakes are recognized for throughout the industry.

Other models are available upon request. Please consult TENNSMITH for specific forming questions or applications.

Heavy-Duty Hand Brakes	HBT48-12	HBT72-16
Capacity, mild steel	12 gauge/2.7 mm	16 gauge/1.6 mm
Capacity, with bending support angle removed, mild steel	16 gauge/1.6 mm	20 gauge/1.0 mm
Bending length	48 in./1220 mm	72 in./1828.8 mm
Maximum lift of beam	1-1/2 in./38.1 mm	1-1/2 in./38.1 mm
Front to rear beam adjustment	1/2 in./13 mm	1/2 in./13 mm
Maximum depth of box	4 in./101.6 mm	4 in./101.6 mm
Minimum reverse bend	5/8 in./16 mm	5/8 in./16 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm
Top segment tooling widths	2, 3 and 4 in. 50.8, 76.2 and 101.6 mm	2, 3 and 4 in. 50.8, 76.2 and 101.6 mm
Lower segment tooling widths	1, 1-1/2, 4, 6, 8, 12, 20 in. 25, 38, 102, 203, 305, 508 mm	1, 1-1/2, 4, 6, 8, 12, 20 in. 25, 38, 102, 203, 305, 508 mm
Bending beam tooling segments	1, 1-1/2, 6, 8, 12, 20 in. 25, 38, 203, 305, 508 mm	1, 1-1/2, 4, 6, 8, 12, 20 in. 25, 38, 102, 203, 305, 508 mm
Maximum transverse bend (through tooling centers)	2 in./50.8 mm	2 in./50.8 mm
Maximum transverse bend (at either end of machine)	3 in./76.2 mm	3 in./76.2 mm
Dimensions, counterweights in place, LxWxH	72 x 36 x 53 in. 1829 x 915 x 1346 mm	89 1/2 x 36 x 53 in. 2273 x 915 x 1346 mm
Shipping weight	1750 lbs./795 kg	2200 lbs./1000 kg

Available options: Radius fingers.



Model HBU48-16
Shown with optional stand.



Model HBS48-16
Shown with optional stand.



Model U48-22
Shown with optional stand.



Model S48-22
Shown with optional stand.

BENCH-MODEL HAND BRAKES

MODELS

HBU48-16

HBS48-16

U48-22

S48-22

**bench
series**



TENNSMITH's bench-mounted hand brakes are rugged, dependable USA-made tools that won't break your budget. Model HBU48-16 is a heavy-duty bench brake suitable for box and pan or straight bending in up to 16-gauge mild steel. The brake features a removable apron angle and apron insert permitting 1/4-inch reverse bends in lighter materials. The upper leaf and nose bar has a wide range of adjustment for radius bending. Standard equipment includes an apron stop rod for repeat bends, extension handles and a counterweight.

Model HBS48-16 is identical in features and capacity to the HBU48-16 but is intended solely for straight bending. Like our larger hand brakes, the HBS48-16 features a replaceable nose bar.

Models U48-22 and S48-22 are lighter capacity versions of the four-foot bench brake, which

<i>Bench-Mounted Hand Brakes</i>	<i>HBU48-16</i>	<i>HBS48-16</i>	<i>U48-22</i>	<i>S48-22</i>
Capacity, mild steel	16 gauge/1.6 mm	16 gauge/1.6 mm	22 gauge/0.75 mm	22 gauge/0.75 mm
Bending length	48-1/4 in./1225 mm	48-1/4 in./1225 mm	48-1/4 in./1225 mm	48-1/4 in./1225 mm
Maximum depth of box	4 in./101.7 mm	—	3 in./76.2 mm	—
Maximum lift of beam	1-1/4 in./31.75 mm	1-3/4 in./44 mm	7/8 in./22.2 mm	7/8 in./22.2 mm
Front to rear beam adjustment	5/8 in./16 mm	5/8 in./16 mm	1/4 in./6 mm	1/4 in./6 mm
Minimum reverse bend	1/4 in./6 mm	1/4 in./6 mm	5/16 in./7.9 mm	5/16 in./7.9 mm
Minimum flange in capacity material	1 in./25 mm	1 in./25 mm	3/8 in./9.5 mm	3/8 in./9.5 mm
Finger widths	2, 3, 4 in. 51, 76, 101 mm	—	2, 3, 4 in. 51, 76, 101 mm	—
Shipping weight	495 lbs./224.5 kg	460 lbs./208.7 kg	280 lbs./127 kg	220 lbs./100 kg

Available options: Bolted assembly stand and radius fingers.

offer economical alternatives in working 22-gauge and lighter materials. Also, their lighter weights make these models better suited for transporting to remote job sites.

TENNSMITH's bench-mounted hand brakes

provide an economical means of performing a wide range of sheet metal bending and forming operations. These brakes are of all-steel welded construction, readily adjustable and utilize bronze bearings at pivot points.

AUTOMATIC FOLDERS

SBS
series



MODELS

SBS12614
SBS15016



Model SBS12614

TENNSMITH's SBS folders are fast, highly durable and ready to meet your needs for years to come. At the heart of the SBS Series is a center-mounted motor and drive system, which maximizes accuracy by minimizing torque loss.

Frequency inverters ensure exceptional accuracy for the back gauge as well as the clamping beam and folding drive systems. Solid-state technology and controls provide reliable performance in difficult working environments while also offering forward compatibility to accommodate additional memory or software enhancement in the future.

- Low-maintenance design ensures fast service, minimum downtime.
- Twin-motor folding beam drive system delivers accuracy and speed—up to 90 degrees per second.

- Center clamping beam drive maximizes power and reduces torque loss.
- Flash memory stores all machine information for fast upgrades and no on-site programming of replacement parts.
- Solid-state electronics minimize maintenance and downtime.
- Touch-screen operation and Windows®-based interface deliver complete operator control.
- Numerous applications include construction, roofing, consumer products, office equipment, appliance manufacturing and a wide range of OEM applications.



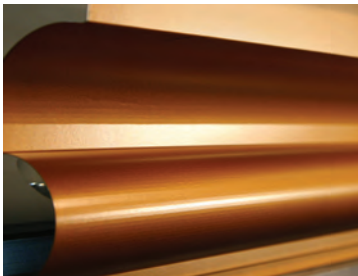
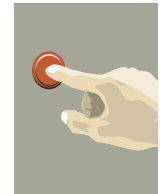
**Contact
TENNSMITH for a
detailed brochure
on SBS Automatic
Folders.**

<i>SBS Series Folders</i>	<i>SBS12614</i>	<i>SBS15016</i>
Bending capacity, mild steel	14 gauge/2.0 mm	16 gauge/1.5mm
Bending capacity, stainless steel	16 gauge/1.5 mm	18 gauge/1.25 mm
Bending length	126 in./3200 mm	150 in./3800 mm
Back gauge depth	40 in./1016 mm	60 in./1524 mm
Clamping beam opening height	7 in./178 mm	7 in./178 mm
Folding beam adjustment	1 in./25 mm	1 in./25 mm
Working height	34 in./864 mm	34 in./864 mm
Dimensions, LxWxH	180 x 96 x 72 in. 4572 x 203 x 1829 mm	204 x 96 x 72 in. 5182 x 203 x 1829 mm
Machine weight	9,020 lbs.	10,180 lbs.
Shipping weight	9,885 lbs.	11,195 lbs.
Back gauge motor	¾ hp	¾ hp
Clamping beam motor	2 hp	3 hp
Bending beam motor	2 + 2 hp	2 + 2 hp

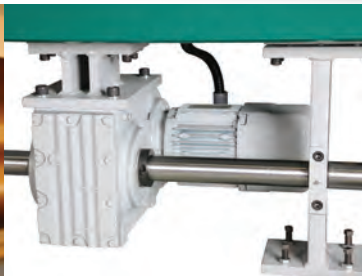
AUTOMATIC FOLDERS

MODELS
SBS12614
SBS15016

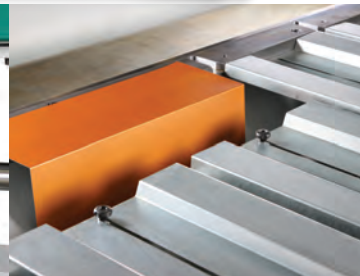
SBS
series



All drive systems are controlled by frequency inverters, a feature that gives the SBS Series folders exceptional accuracy.



Center motor placement maximizes power while reducing torque loss through the drive shaft.



Adjustable base panels enable the SBS Series to create an intricate and endless range of finished pieces.



Twin motor drives for the folding contribute both speed and a high degree of accuracy.

SBS Series Speeds	SBS12614	SBS15016
Clamping beam speed	2.5" per second	2.0" per second
Folding beam speed	90 degrees per second	90 degrees per second
Back gauge speed (0.375" to 40")	7 seconds	7 seconds

With a weight beginning at 9,400 lbs., SBS Series folders are not only more substantial than competitive folders, they promise long-lasting performance in any manufacturing facility or shop floor. They'll stand up to the rigors of hard work day after day, year after year. Yet, while these folders have the brawn to perform under the toughest conditions, they are also incredibly smart.

Parts for SBS Series folders will continue to be readily available from distributors or through our Tennessee-based manufacturing facility and company headquarters.

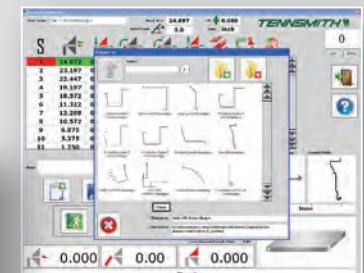
The SBS Series folders along with all TENNSMITH machines maintain the highest-quality standards known with its brand name.

SBS control features:

- Graphical programming of profiles
- Hemming macros for open, closed, and teardrop hems
- Radius macro for complex bending of different radii (cornice work, etc.)
- Parts counter
- Bend compensation for different material spring back and bending bar set-up
- Automatic blank calculation
- Material handling instructions



Run Screen



Saved Profile Screen



Graphic Screen

NOTCHER, CLEAT & CHEEK BENDERS

manual tools



MODELS

18
24
30
DS24-20
16-18

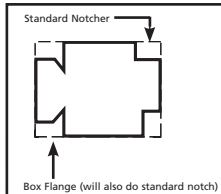
Model 24 Cleat Bender
Shown with optional stand.



Model DS24-20 Cheek Bender



Optional Box Flange Blade



Optional box flange blades are available for the reinforced box, pan and chassis corners. Front gauges and large-surface, ground work table with inlaid scales are standard features.

Model 16-18
Shown with optional stand.

Cleat Benders	Model 18	Model 24	Model 30
Maximum capacity, mild steel	20 gauge/1.0 mm	20 gauge/1.0 mm	20 gauge/1.0 mm
Maximum bending	18 in./457 mm	24 in./610 mm	30 in./762 mm
Depth of drive cleat	1/2 in./12.7 mm	1/2 in./12.7 mm	1/2 in./12.7 mm
Dimensions, handles removed, LxWxH	25-1/2 x 12-1/2 x 12-1/2 in. 648 x 317.5 x 317.5 mm	32 x 10 x 11 in. 813 x 254 x 280 mm	38 x 10 x 11-1/2 in. 965 x 254 x 292 mm
Shipping weight	63 lbs./29 kg	95 lbs./44 kg	150 lbs./59 kg

Available option: Heavy-duty fabricated stand.

TENNSMITH's cleat benders are manually operated tools that form uniform drive cleat edges on rectangular ductwork in seconds without set-up or adjustment. The upper handle forms the cleat and the lower handle opens the tool for easy removal of the material. Heavy cast iron and fabricated steel construction provides long life and trouble-free operation. A TENNSMITH cleat bender can save you time and money.

TENNSMITH's Model DS24-20 cheek bender is a rugged tool built for increased productivity while getting the most consistent bends quickly. This model's two-way trunnion design holds the bending apron steady at the base of the bend ensuring accuracy throughout the length of the sheet.

This machine can be bench-mounted and adjusts for bends of 1/4 to 7/8 inches, 24 inches long.

TENNSMITH's cheek bender handles mild steel to 20-gauge.

The TENNSMITH notcher, Model 16-18, is a versatile, heavy-duty bench tool for shearing, notching and piercing work. The heavy cast iron construction allows the notcher to be used to side shear six inches of material to its rated capacity; and the throat behind the upper ram is beveled on one side to permit long strips of material to pass without restriction.

Notches of more than 90 degrees can be accomplished in two operations. The upper blades can be reversed for a "nose to heel" cutting action; and the ram stroke can be controlled by means of two set screws to permit limited throat piercing and knockout operations.

Cheek bender	DS24-20
Capacity, mild steel	20 gauge/1.0 mm
Maximum bending	24 in./610 mm
Bend depth	1/4 in. - 7/8 in. 6.35 mm - 22.2 mm
Dimensions, handles removed, LxWxH	31 x 8-1/4 x 2-3/4 in. 788 x 216 x 70 mm
Shipping weight	80 lbs./37 kg

Notcher	Model 16-18
Maximum capacity notching, mild steel	16 gauge/1.6 mm
Maximum capacity piercing, mild steel	18 gauge/1.25 mm
Notch	6 x 6 in. x 90 degrees 152 x 152 mm x 90 degrees
Dimensions, handles removed, LxWxH	19 x 18 x 15 in. 238 x 257 x 381 mm
Shipping weight	170 lbs./77 kg

Available options: Tab blades and heavy-duty fabricated stand.

Electrical Specifications

TENNSMITH power machinery features high quality brand name electrical components manufactured in the USA. Replacement components are generally readily available over the counter at electrical supply houses in any industrial market area. Our equipment features transformed control circuits for operator safety. TENNSMITH equipment is made to conform with J.I.C. standards through the addition of a NEMA-12 enclosure and disconnects. This is standard on all TENNSMITH machines.

Parts

Every effort is made for prompt fulfillment of parts orders. With the entire manufacturing process occurring at our facilities in Middle Tennessee, you can rest assured that parts for your TENNSMITH machinery are, and will continue to be, readily available. Parts may be ordered through your local TENNSMITH distributor. If further assistance is needed, feel free to contact the factory. To facilitate processing of your order, please specify the model and serial number of your machine, and include the part number you require. Additional parts manuals are available upon request.

Operating Capacities

Operating capacities of TENNSMITH machinery are rated for AISI 1020 steel, 80,000 psi tensile, 44,000 psi yield (unless otherwise specified).

Approximate Shearing, Bending and Forming Capacities for Various Materials Compared to Mild Steel

Mild Steel Capacity	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.	10 Ga.
FERROUS METALS								
Iron – dead soft	Same as Mild Steel							
Steel – low carbon H.R.	Same as Mild Steel							
Steel – low carbon C.R.	Same as Mild Steel							
Steel – 40-50% carbon H.R.	28 Ga.	26 Ga.	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.
Steel – 1074, 1095 C.R annealed spring steel	28 Ga.	26 Ga.	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.
Steel – low carbon C.R. HARD	26 Ga.	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.
Stainless – annealed	28 Ga.	26 Ga.	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.
NON-FERROUS METALS								
Aluminum – 1100-0, 2024-0, 3004-0, 5052-0, 5052-H32, 6061-T4, 6061-0, 6063-0, 6063-T4, 7075-0	.050	.060	.070	.090	.125	.150	.200	.3125
Aluminum – 2011-T3, 2014-T4, 2024-T3, 5086-H36, 6061-T6	.030	.036	.048	.063	.090	.105	.125	.150
Aluminum – 2014-T6, 7075-T4, 7075-T6	.015	.018	.024	.030	.036	.048	.060	.075
Copper – electrolytic	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.	10 Ga.	8 Ga.
Bronze – commercial	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.	10 Ga.	8 Ga.
Brass 70-30	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.	10 Ga.	8 Ga.
Nickel alloys – inconel 600, monel R405, nickel 200A annealed	28 Ga.	26 Ga.	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.
Zinc – as rolled	Same as Mild Steel							
PLASTICS								
ABS compounds	.060	.090	.120	.150	.200	.225	.250	.3125
Polycarbonate	.048	.063	.075	.125	.125	.156	.188	.200
PRINTED CIRCUIT BOARDS								
Copper-clad epoxy laminate	.058	.072	.086	.115	.150	.200	.250	.3125

Approximate Gauge Equivalents

Gauge	28 Ga.	26 Ga.	24 Ga.	22 Ga.	20 Ga.	18 Ga.	16 Ga.	14 Ga.	12 Ga.	11 Ga.	10 Ga.
inches	.015	.018	.024	.030	.036	.048	.060	.075	.105	.120	.135
mm	.38	.46	.61	.76	1.00	1.25	1.60	2.00	2.70	3.05	3.50

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3-YEAR LIMITED WARRANTY

TENNSMITH machinery and component parts are carefully inspected at various stages of production and are tested and inspected prior to shipment. We agree that for a period of twelve (12) months from date of delivery from our authorized distributor to replace, at our option, any machine (or component part thereof) proving defective within the above period. Additionally, we agree that for a period of thirty-six (36) months from date of delivery to replace component parts proving defective within the stated period. All warranty claims are made



FOB our plant, providing such machine (or component part) is returned freight prepaid to our plant, or a designated service center of the undersigned, for our examination. This warranty does not include repair or replacement required because of misuse, abuse, or because of normal wear and tear; or electrical components which are warranted by their manufacturer. Further, we cannot be responsible for the cost of repairs made or attempted outside of our factory or designated service center without our authorization. No claims for defects will be honored if the name and data plate has been removed. This warranty is made expressly in place of all other warranties or guarantees, express or implied, with respect to fitness, merchantability, quality or operativeness. This warranty becomes effective only when the accompanying warranty card is fully and properly filled out and returned to the factory within ten (10) days from date of delivery.

OTHER APPLICATIONS FOR TENNSMITH MACHINERY

TENNSMITH tools are most often used in cutting and forming light gauge steel sheet but are also suitable for fabricating or processing stainless steel, aluminum, plastics, non-ferrous sheet, laminates, printed circuit boards, paper and card stock, wire cloth and numerous other materials. Space limitations prevent listing capacity comparisons on all of the various possibilities. However, we would be pleased to work with you on specific applications if you will call or write us at the factory. Material characteristics or samples are helpful.

Specifications subject to change without notice.