LOW PROFILE SHEARS

LM series

MODELS
LM410
LM610
LM810

SCOTT MACHINERY
Providing Solutions.

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Model LM410
Shown with optional squaring arm, front supports, light beam and digital readout (DRO).

TENNSMITH's low-profile LM Series mechanical shears utilize a simple low maintenance design, coupled with an array of standard features for an attractive combination of high value and solid performance.

Models LM410, LM610, LM810, LM1014 and LM1214 now incorporate the unique 2x back gauge system. This allows the operator to move the backstop from 0 up to 30 inches (0 to 24 inches for Model LM410) in approximately 2 seconds with only two rotations of the handle. An optional digital readout is available for this system.

The LM Series shears are standard with four-edge, high carbon, high chrome top and bottom blades, independent, self-leveling holddown feet with neoprene inserts, single, continuous and job stroke cycles, motor reverse switch, precision-machined table with hand well, dual inch/metric inlaid bed scales and non-metallic gibs.

The LM410 model incorporates all of the popular LM series features into this 52" cutting length, 10-gauge mild-steel capacity shear. Model LM610 has a rated capacity of 10-gauge

Low-Profile Mechanical Shears	*LM410*	*LM610*	*LM810*
Maximum shearing capacity, mild steel	10 gauge/3.5 mm	10 gauge/3.5 mm	10 gauge/3.5 mm
Maximum shearing capacity, stainless steel	14 gauge/2.0 mm	14 gauge/2.0 mm	14 gauge/2.0 mm
Maximum cutting length	52-1/2 in./1334 mm	60-1/2 in./1525 mm	97 in./2464 mm
Back gauge range	24 in./610 mm	30 in./610 mm	30 in./762 mm
Strokes per minute, full length	35	35	35
Number of holddown feet	8	12	14
Motor–230/460v, 3-phase, 60Hz	7.5 hp	7.5 hp	10 hp
Dimensions, LxWxH	72 x 68 x 55-1/2 in. 1829 x 1753 x 1410 mm	81 x 69 x 56 in. 2058 x 1753 x 1423 mm	116 x 72 x 56 in. 2947 x 1829 x 1423 mm
Shipping weight	3,400 lbs./1542 kg	4,000 lbs./1815 kg	6,800 lbs./3091 kg

Available options: Please consult a representative for a complete listing.

LOW PROFILE SHEARS

MODELS
LM1012
LM1014
LM1214

LM series

Model LM1014-F — Shown with optional front sheet support system, front support arms and squaring arm.

mild steel with a maximum cutting length of 60-1/2 inches.

The LM1014 will handle 14-gauge mild steel up to 121 inches. The LM1214 is rated for 14-gauge mild steel with 145-inch cutting length.

To enhance productivity, optional equipment available for the machines include:

- Five or ten-foot squaring arm
- Front support arms
- Protractor attachment

On models LM1014 and LM1214, the air operated sheet support is available in two styles:

- **System R** drops the supported material to the rear of the machine.
- **System F** returns the supported material to the front of the machine via a front return chute.

The LM Series shears are now available in an optional "Performance Package" configuration.

Low-Profile Mechanical Shears	*LM1012*	*LM1014*	*LM1214*
Maximum shearing capacity, mild steel	12 gauge/2.7 mm	14 gauge/2.0 mm	14 gauge/2.0 mm
Maximum shearing capacity, stainless steel	16 gauge/1.6 mm	18 gauge/1.25 mm	18 gauge/1.25 mm
Maximum cutting length	121 in./3073 mm	121 in./3073 mm	145 in./3683 mm
Back gauge range	30 in./762 mm	30 in./762 mm	30 in./762 mm
Strokes per minute, full length	35	35	35
Number of holddown feet	16	16	18
Motor–230/460v, 3-phase, 60Hz	7.5 hp	5 hp	7.5 hp
Dimensions, LxWxH	140 x 72 x 56 in. 3556 x 1829 x 1423 mm	143 x 69 x 56 in. 3632 x 1829 x 1423 mm	164 x 72 x 56 in. 4166 x 1829 x 1423 mm
Shipping weight	6,400 lbs./2910 kg	5,900 lbs./2682 kg	7,530 lbs./3423 kg

Available options: Please consult a representative for a complete listing.

The LM Performance Package includes:

1. Five-foot squaring arm 2. Pair of front support arms 3. Air-operated sheet support system, F or R*

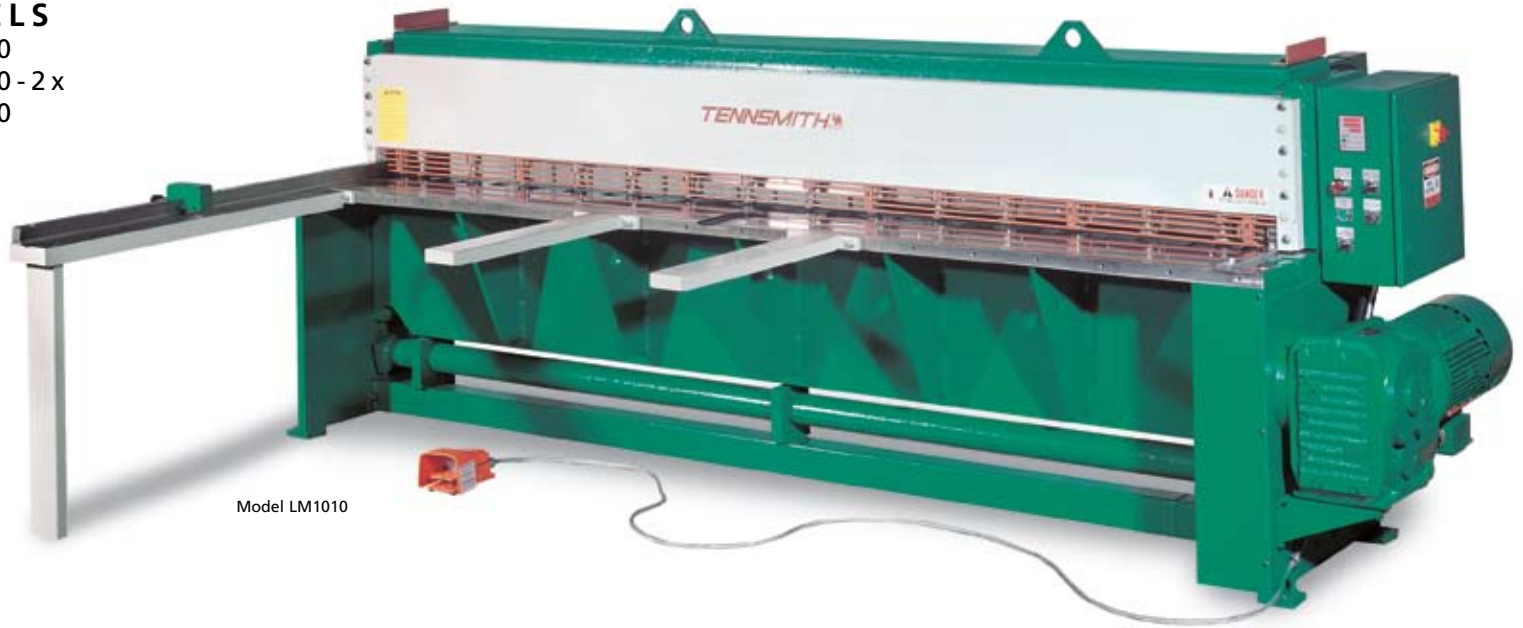
*"F" is a Front Return Material System via material tray located under the shear table. "R" is a Rear Return Material System.

LOW PROFILE SHEARS

LM series

MODELS

LM1010
LM1010-2x
LM1210



Model LM1010

TENNSMITH's LM1010 is equipped with a standard "GO TO" 30-inch back gauge system. The ballscrew-driven back gauge provides quick, accurate cuts. The LM1010 is powered by a 12-1/2-hp gear motor attached to a mechanical linkage which provides smooth, quiet operation.

The LM1010 is rated at a maximum of 10-gauge material with a cutting width of 121 inches. To enhance productivity, optional equipment available for the machines include: five or ten-foot squaring arm, front support arms, light beam and protractor attachment. A rear drop sheet support system is available for the LM1010.

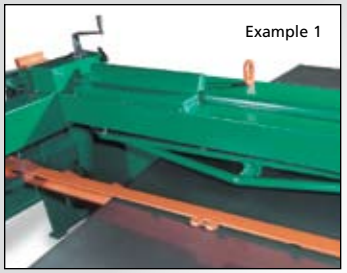
Additionally, the LM1010-2x is equipped with the popular 2x manual back gauge option. This allows the operator to move the backstop from 0 to 30 inches in approximately two seconds with only two rotations of the handle. An optional digital readout is available for this system.

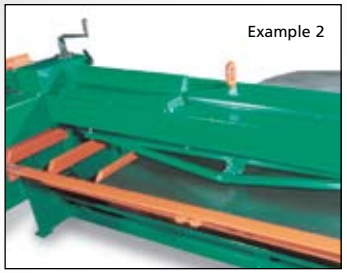
TENNSMITH LM Series shears are quality manufactured in the USA at competitive prices.

Low-Profile Mechanical Shears	*LM1010*	*LM1010-2x*	*LM1210*
Maximum shearing capacity, mild steel	10 gauge/3.5 mm	10 gauge/3.5 mm	10 gauge/3.5 mm
Maximum shearing capacity, stainless steel	14 gauge/2.0 mm	14 gauge/2.0 mm	14 gauge/2.0 mm
Maximum cutting length	121 in./3073 mm	121 in./3073 mm	145 in./3683 mm
Back gauge range	30 in./762 mm (Go-To)	30 in./762 mm (2x)	30 in./762 mm (Go-To)
Strokes per minute, full length	35	35	35
Number of holddown feet	16	16	18
Motor–230/460v, 3-phase, 60Hz	12.5 hp	12.5 hp	2 x 7.5 hp
Dimensions, less gauges, LxWxH	145 x 39 x 59-1/2 in. 3683 x 991 x 1511 mm	145 x 39 x 59-1/2 in. 3683 x 991 x 1511 mm	169 x 39 x 60 in. 4293 x 991 x 1524 mm
Floor space, gauges in position	145 x 78 x 60 in. 3683 x 1981 x 1524 mm	145 x 78 x 60 in. 3683 x 1981 x 1524 mm	169 x 78 x 60 in. 3683 x 1981 x 1511 mm
Shipping weight	9,400 lbs./4272 kg	9,400 lbs./4272 kg	11,400 lbs./5182 kg

Available options: Please consult a representative for a complete listing.

OPTIONAL SHEET SUPPORT SYSTEM





The optional sheet support system is recommended for gauging of thin material. With this air-powered support mechanism, one operator can effectively shear cumbersome, light-gauge stock. The sheet support system is available in two styles: **System F**, available on models LM1014 and LM1214, is a front return support which drops sheared parts to a front chute for easy retrieval; and support **System R** which drops sheared material to the rear of the machine.

Unlike competitive front return systems, with the LM Series Performance Package F, you can cut materials longer than the standard back gauge length by deactivating the sheet support.

Example 1 illustrates longer material being sheared by sliding material under the backstop. Most competitors are limited to 24" or 30," and longer pieces cannot be sheared like a TENNSMITH does.
Example 2 illustrates the sheet support system.

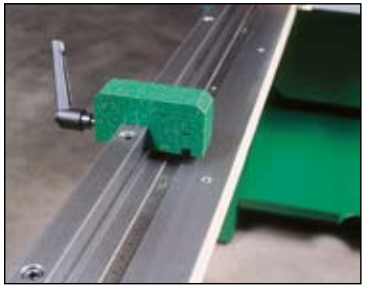
2X BACK GAUGE WITH DIGITAL READOUT

All MSE and LM models come standard with the unique 2x back-gauge system. The design of the 2x allows the operator to position the back stop from 0 to 30 inches with only two rotations of the handle. Speed of the 2x is unmatched with positioning speeds of only 2 seconds. With the combination of the Optional Digital Readout for 2x Back-gauge System, the operator adds both speed and great accuracy to the job. The optional digital display shows measurements in 0.001" increments. Longer travel ranges are available by request.

NOTE: Safety guard has been removed for photo purposes only.

STANDARD INDEPENDENT HOLDDOWNS

Independent, spring-loaded, self-leveling holddowns exert uniform pressure on a work piece, ensuring an accurate cut. The plungers have neoprene inserts to prevent marring the surface of the piece.



OPTIONAL SQUARING ARM

The optional five-foot squaring arm is a precision gauge, which can be mounted left or right and has inlaid inch/metric scaling and adjustable guide block. Also available in ten and twelve-foot lengths. A toggle on the block lets sheet stock slide underneath, then pivots to the stop position.

OPTIONAL GO-TO BACK GAUGE SYSTEM

The optional Go-To back-gauge system features a twin ball screw design which provides accuracy and repeatability. The standard travel range is 30-inches, longer travels are available. The back-gauge is powered by a 3/4 –hp gear motor and operated by a Go-To control system. Models LM1010 and LM1210 are standard with this system.

MORE OPTIONS AVAILABLE

- Five-foot squaring arm
- 10-foot squaring arm
- Front support arms
- T-slotted table — Supports arms with Inlaid Inch/Metric Scales
- Material cart (MSE1016 and LM1014)
- Stroke counter
- Protractor for angled cuts
- Go-To ball screw driven back gauge
- High speed motors for increased cutting cycles
- Air-operated sheet support system (Front or Rear return)
- Performance packages

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 are 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

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.

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