

CINCINNATI

SE SHEAR

Plate Processing

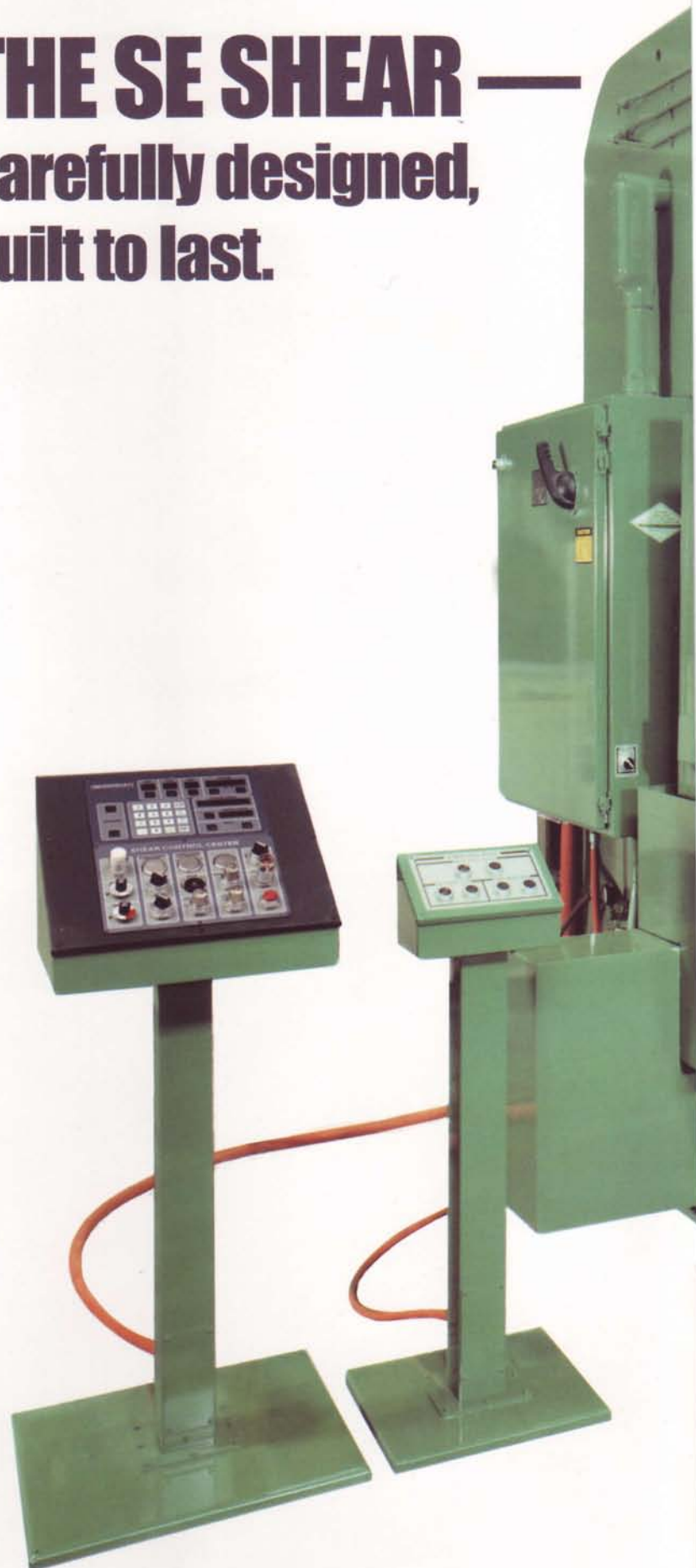


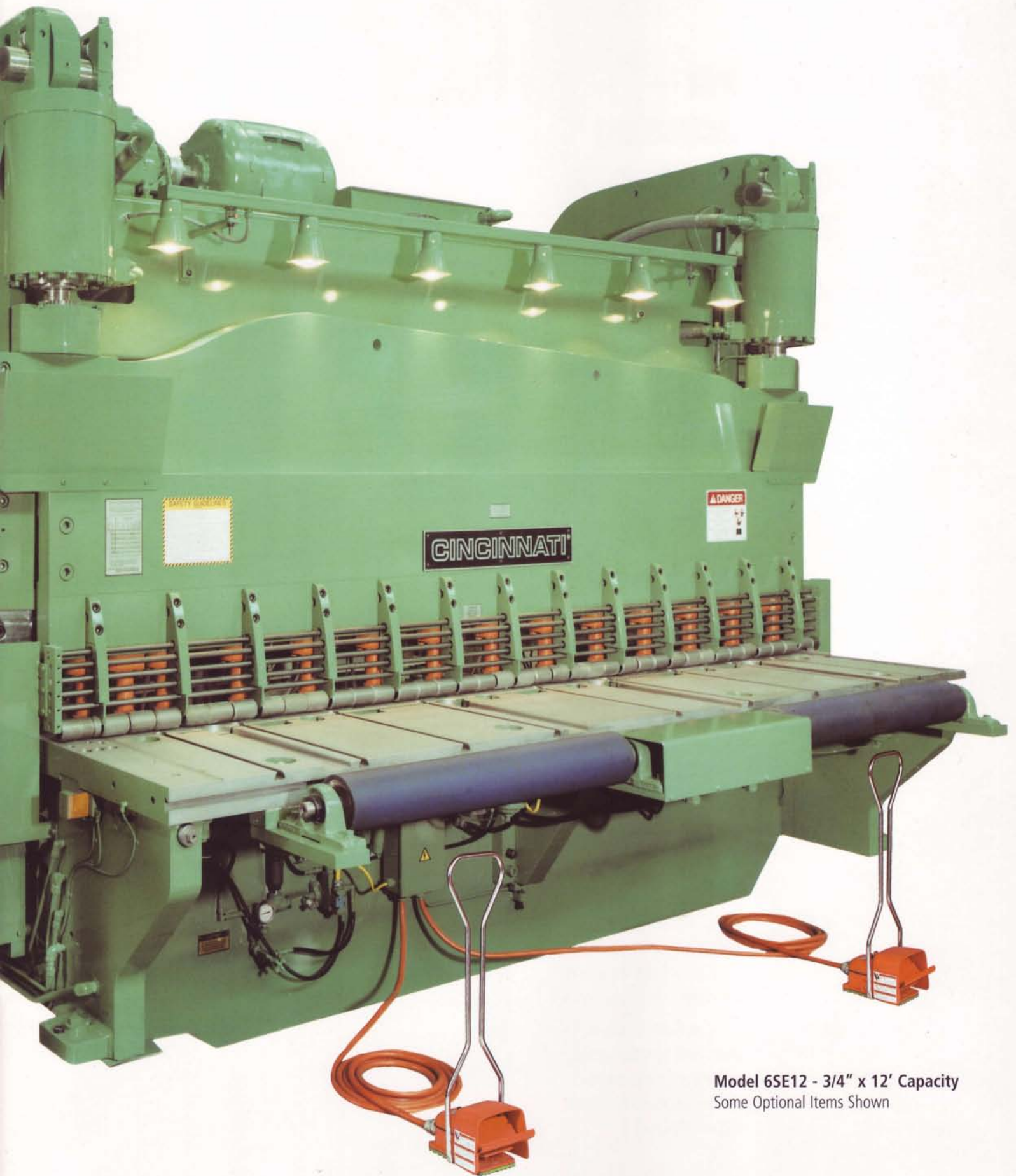
For over 70 years steel service centers and fabricators have entrusted their shearing operations to Cincinnati Incorporated. Through proven performance and factory support, CINCINNATI shears have earned the highest reputation from the metal processing industry for productivity and reliability. The Cincinnati SE Shear will impress even the most experienced plate processor. Strong interlocked frame members, rigid shear table and ram brace, clevis mounted hydraulic cylinders, and a rugged backgage ensure that the SE is built to last. Carefully designed for durability, the SE also features versatility and simple operation.

The SE standard design features include deep throats for slitting long sheets, power swing-up backgage for shearing deep back pieces, adjustable knife clearance, adjustable rake angle and precision knife straightener for producing quality blanks.

The Shear Control Center is easy to use and includes a Digital Gage Control that simplifies backgage positioning. Available in 1/2", 3/4" and 1" capacities, the SE Shear is ready to validate its reputation in your plate shearing process.

THE SE SHEAR — Carefully designed, built to last.



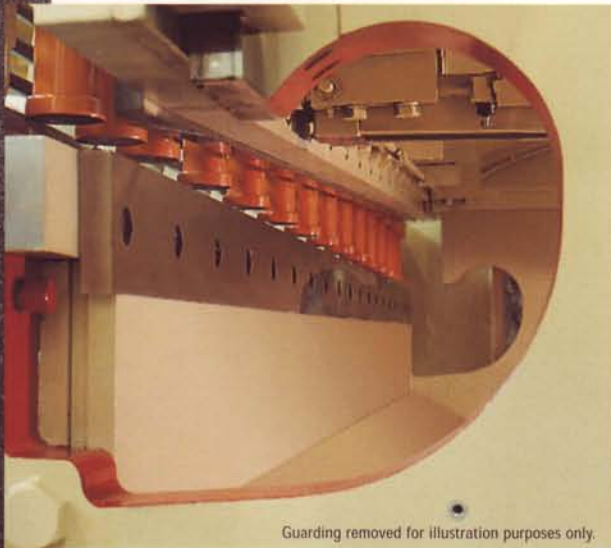


Model 6SE12 - 3/4" x 12' Capacity
Some Optional Items Shown

The SE Shear — A plate processing machine that is both versatile and durable.

Versatile

The CINCINNATI gap-frame design provides an easy method of shearing plates longer than the shear. Ram stroke is adjusted to prevent the knives from crossing completely at the "high" end. Plate can then be slit in successive cuts by progressively moving it through the throat.



Guarding removed for illustration purposes only.



Adjustable knife clearance offers processors the opportunity of shearing a wide variety of materials and thickness while maintaining a cleaner edge without double shear and burrs.



Convenient hand slots and ball transfers in the shear table enable safe handling of large plate and small pieces.



Precision knife straightener with adjustments on 12" centers adds versatility by improving the sheared edge condition on jobs that require precise knife alignment along the entire length of the shear. The precision knife straightener will improve your results when shearing thin materials, gussets, trim cuts, stainless steels and super alloys with high nickel content. After turning the knives, this feature provides a fast and simple alignment method without shimming.

Durable

Shock-absorbing springs protect the precision backgage against plate impact. A concealed cross-shaft prevents damage to the backgage from external sources such as material handling equipment.

Micrometer adjusting nuts at the end of the backgage guide provide an easy means to adjust the backgage angle parallel to the lower knife. Hydraulic pullback cylinders pull the backgage angle away from the knife to prevent material binding.

Automatic lubrication through individual oil lines to all critical areas ensures low maintenance on all wearing surfaces.

Unique hydraulic manifold block design offers maximum reliability and ease of maintenance.

Shear knives with the best combination of wear and shock resistance will be recommended by CINCINNATI after reviewing a shearing list of the material types and thicknesses to be processed on the shear. This provides more cuts per edge and longer life between regrinds.

Self aligning clevis-mounted cylinders and hardened piston rods provide long-term trouble-free operation.

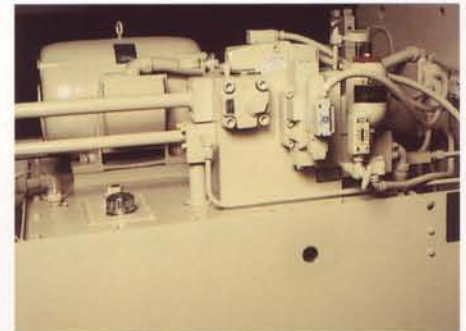
Hand scraped bronze slides running on ground guides extend equipment life considerably. Hand fitting also adds to the long term output of consistently accurate blanks.



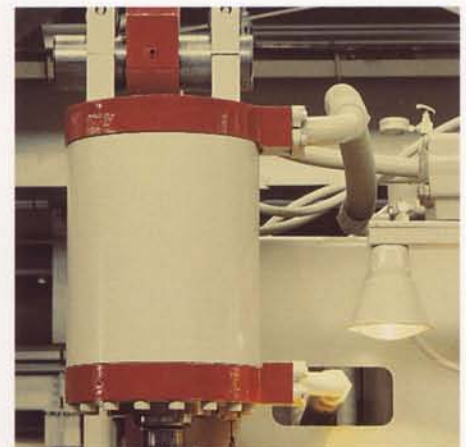
Heavy Duty Backgage



Automatic Lubrication



Unique Hydraulic Manifold Block



Self-aligning Clevis Mounted Cylinders

The SE Shear — Never before has plate processing been so simple.

Simple operation is a benefit of owning a CINCINNATI SE Shear. Machine controls are located on a floor mounted pedestal stand that was designed to provide fast, simple and safe setups.

Operators will quickly learn how to operate the shear and backgagge without having to remember complicated procedures. Designed for performance, the SE Shear will boost productivity cut after cut.



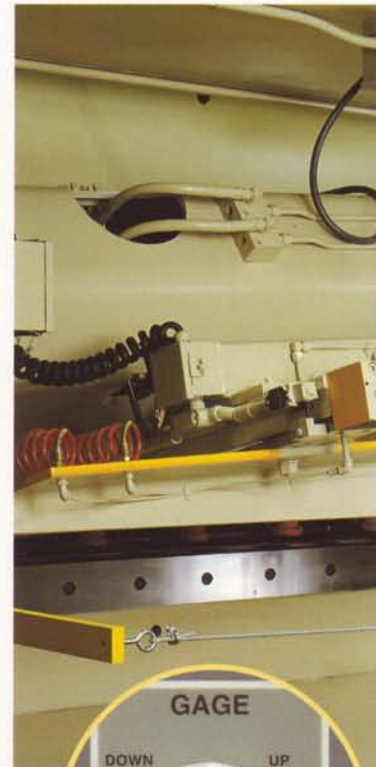
Some optional items shown.



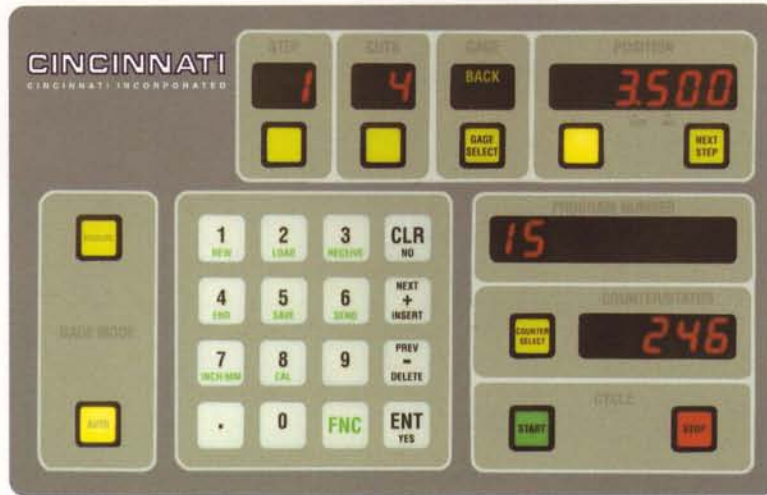
Productivity is increased by electronic selection of the cut length. Rotating the material length selector limits the knife travel to only the cutting portion of the stroke.

Blank distortion is minimized by electronically adjusting rake angle to the minimum setting for each material thickness.

Short stroking on either the left or right side of the shear minimizes knife wear. Short stroke on the right side is also used for slitting operations.



Positioning the backgage is fast, simple and repeatable on the SE Shear.



The Digital Gage Control positions the backgage for simple single cuts or for multiple shearing sequences up to 99 steps. A total of 200 programs can be saved in the internal battery-backed memory.

The control positions the backgage to within ± 0.005 " (± 0.13 mm) of the commanded position and repeats within ± 0.002 " (± 0.005 mm). The easy-to-use data entry system permits gage adjustments to 0.001" (0.03mm). An LED readout displays the gage positions, step numbers and machine strokes. The control can be programmed in English or metric units.



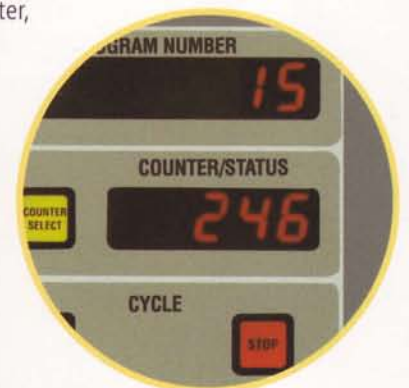
Shearing back pieces deeper than the backgage range is simple on the SE Shear. A power swing-up backgage is provided as standard and is easily raised up or down by a switch located on the Shear Control Center.



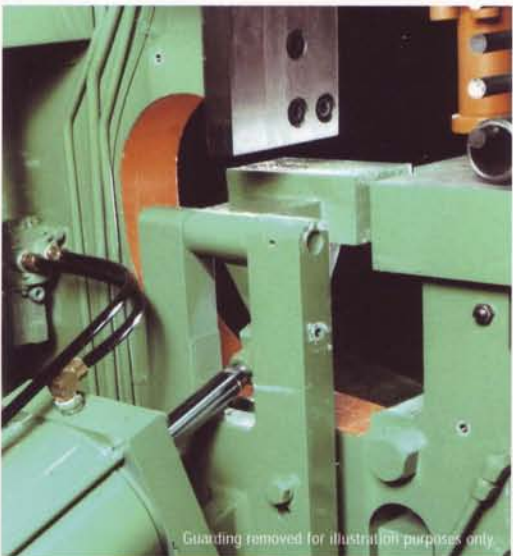
The simplest way to use the Digital Gage Control is in manual mode which allows gage positioning when programming is not desired. The shear can be stroked as soon as the gage reaches its new position and can be stroked as many times as necessary.

AUTO mode allows the gages to move through a programmed sequence of positions. The control will keep track of the number of strokes made by the shear and automatically move the gages at the proper times. The programs can consist of up to 99 steps.

Three counters: stroke counter, batch counter and production counter, are provided to keep track of parts produced. The counter values are retained even when power is off.



SE Shear Options For Added Performance and Productivity



The **power knife clearance** option reduces setup time by allowing the operator to select and adjust the knife clearance from a single convenient location. The electronic position switch is located on the Shear Control Center and contains four preset knife clearance positions.

A **back piece support** reduces or eliminates the effects of edge angularity and "tear out" by holding the backpiece at table level during the shearing cut.

Increased throat depths are available for slitting operations that require a throat greater than 15".

A **slitting attachment** is optionally available to support the plate during this operation. Increased throat area in place of standard may be required for large backpiece parts.



An air cooled heat exchanger (standard on 6SE and 8SE) and a thermostatically controlled heater unit for the oil reservoir can be included to compensate for varying temperature environments.

The light beam shearing gage makes shearing to scribed lines easy and accurate. With this device, the operator simply sets his cut line along a sharp shadow. The 110 volt lights have the additional advantage of illuminating the shear table.

Increased ram speeds of up to 40 percent over standard ram speeds may be quickly justified when processing large numbers of identical narrow parts. Certain applications using 50 Hertz electricals may require a larger main drive motor for maintaining standard 60 Hertz ratings.

Air operated ball transfers can be furnished for positioning plate. Eliminating spring adjustment for varying plate weight reduces operator fatigue and improves handling efficiency.

The power front feed rolls (see page 3) provide independently controlled, reversible rollers to speed workpiece handling and control material movement when shearing heavy plate. Material can be moved forward or back and easily rotated. Eliminating the use of an overhead crane for positioning and feeding raw material into the shear improves productivity and avoids potential damage of high impact loads against the backgage.

An additional footswitch is recommended for safety if you anticipate having two persons working together on the shear.



Extra dovetail slots in the table or custom designed hand slots in the table, perpendicular to the knives, aids fixturing and material handling.

The front gage support and squaring arm for accurately positioning material and maintaining parallel cuts are quickly justified. Front gage support arms in varying lengths help process more plate through the shear.

Fractional scales can be chosen in place of the standard decimal scale at no charge. Metric scales or special scales with 1/16th inch graduations at one edge and millimeter on the other edge are options available for the shear table and squaring arm with ranges of 6', 8', 10', 12' or 14' (1.8m, 2.4m, 3m, 3.6m or 4.3m).

Standard 48-inch backgage range on 14 feet and shorter machines can be extended to a 60-inch range at a nominal cost.



Conveyor shown is 3/4" capacity plate.

A CINCINNATI Plate Conveyor removes sheared material to further improve productivity. Scrap can be separated for collection in a bin, making removal of finished parts safe and efficient. Controls are located on the conveyor, but interfaced with the Shear Control Center.

ENGLISH SPECIFICATIONS

MODEL	(1) CAPACITY MILD STEEL	LENGTH BETWEEN HOUSINGS	MAXIMUM RAKE INCHES/FOOT	HOLDDOWNS		GAGE RANGE (INCHES)		SPEED-IN/MINUTE		STROKES/MINUTE (3)		HP	KNIFE SIZE (INCHES)
				FORCE TONS	NUMBER	BACK	FRONT(2)	UP	LOAD DOWN	MAX	MIN.		
4SE06	1/2"	6' - 3"	7/16"	16	9	48	47	360	113	31	17	40	1 X 4
4SE08	1/2"	8' - 3"	7/16"	19-1/2	11	48	47	360	113	30	14	40	1 X 4
4SE10	1/2"	10' - 3"	7/16"	23	13	48	50	360	113	30	12	40	1 x 4
4SE12	1/2"	12' - 3"	7/16"	26-1/2	15	48	54	360	113	30	11	40	1 x 4
4SE14	1/2"	14' - 3"	7/16"	30	17	48	59	360	113	29	10	40	1 X 4
4SE16	1/2"	16' - 3"	7/16"	33-12	19	60	64	360	113	29	9	40	1 X 4
4SE20	1/2"	20' - 3"	7/16"	40-1/2	23	60	65	360	113	28	7	40	1 x 4
6SE06	3/4"	6' - 3"	11/16"	28-1/2	9	48	48-7/8	258	120	25	11	50	1-1/8 X 5
6SE08	3/4"	8' - 3"	11/16"	35	11	48	48-7/8	258	120	25	10	50	1-1/8 X 5
6SE10	3/4"	10' - 3"	11/16"	41-1/2	13	48	48-7/8	258	120	24	8	50	1-1/8 x 5
6SE12	3/4"	12' - 3"	11/16"	47-1/2	15	48	52-7/8	258	120	24	7	50	1-1/8 x 5
6SE14	3/4"	14' - 3"	11/16"	54	17	48	58-7/8	258	120	24	6	50	1-1/8 X 5
6SE16	3/4"	16' - 3"	11/16"	60-1/2	19	60	58-7/8	258	120	23	6	50	1-1/8 X 5
6SE20	3/4"	20' - 3"	11/16"	73	23	60	64-7/8	258	120	22	5	50	1-1/8 x 5
8SE06	1"	6' - 3"	3/4"	39-1/2	9	48	62-1/4	175	78	16	7	50	1-1/2 X 5-1/2
8SE08	1"	8' - 3"	3/4"	48	11	48	62-1/4	175	78	15	6	50	1-1/2 X 5-1/2
8SE10	1"	10' - 3"	3/4"	57	13	48	62-1/4	175	78	15	5	50	1-1/2 x 5-1/2
8SE12	1"	12' - 3"	3/4"	65-1/2	15	48	65-1/4	175	78	15	4	50	1-1/2 x 5-1/2
8SE14	1"	14' - 3"	3/4"	74-1/2	17	48	68-1/4	175	78	14	4	50	1-1/2 X 5-1/2
8SE16	1"	16' - 3"	3/4"	83	19	60	72-1/4	175	78	14	3	50	1-1/2 x 5-1/2
8SE20	1"	20' - 3"	3/4"	100	23	60	76-1/4	175	78	14	3	50	1-1/2 X 5-1/2

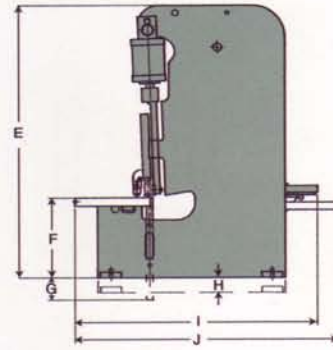
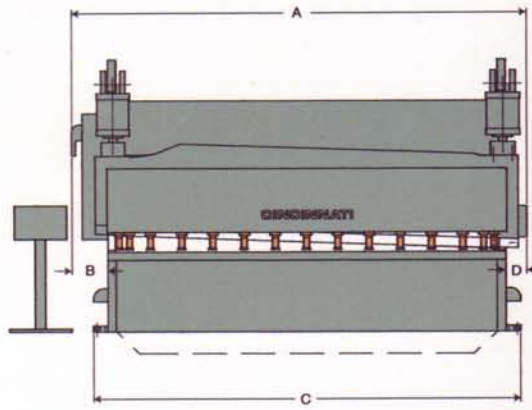
METRIC SPECIFICATIONS

MODEL	(1) CAPACITY MILD STEEL	LENGTH BETWEEN HOUSINGS	MAXIMUM RAKE	HOLDDOWNS		GAGE RANGE (MILLIMETER)		SPEED-MM/SECOND		STROKES/MINUTE (3)		MOTOR KW	KNIFE SIZE (mm)
				FORCE Kn	NUMBER	BACK	FRONT(2)	UP	LOAD DOWN	MAX	MIN.		
4SE06	12mm	1900mm	2° 5'	142	9	1220	1194	152	48	31	17	29.8	25 x 100
4SE08	12mm	2510mm	2° 5'	173	11	1220	1194	152	48	30	14	29.8	25 x 100
4SE10	12mm	3120mm	2° 5'	205	13	1220	1270	152	48	30	12	29.8	25 x 100
4SE12	12mm	3730mm	2° 5'	236	15	1220	1372	152	48	30	11	29.8	25 x 100
4SE14	12mm	4340mm	2° 5'	267	17	1220	1499	152	48	29	10	29.8	25 x100
4SE16	12mm	4950mm	2° 5'	298	19	1524	1626	152	48	29	9	29.8	25 x 100
4SE20	12mm	6170mm	2° 5'	360	23	1524	1651	152	48	28	7	29.8	25 x 100
6SE06	19mm	1900mm	3° 16'	254	9	1220	1242	109	51	25	11	37.3	28 x 127
6SE08	19mm	2510mm	3° 16'	311	11	1220	1242	109	51	25	10	37.3	28 x 127
6SE10	19mm	3120mm	3° 16'	369	13	1220	1242	109	51	24	8	37.3	28 x 127
6SE12	19mm	3730mm	3° 16'	423	15	1220	1343	109	51	24	7	37.3	28 x 127
6SE14	19mm	4340mm	3° 16'	480	17	1220	1495	109	51	24	6	37.3	28 x 127
6SE16	19mm	4950mm	3° 16'	538	19	1524	1495	109	51	23	6	37.3	28 x 127
6SE20	19mm	6170mm	3° 16'	649	23	1524	1648	109	51	22	5	37.3	28 x 127
8SE06	25mm	1900mm	3° 34'	351	9	1220	1581	74	33	16	7	37.3	38 x 140
8SE08	25mm	2510mm	3° 34'	427	11	1220	1581	74	33	15	6	37.3	38 x 140
8SE10	25mm	3120mm	3° 34'	507	13	1220	1581	74	33	15	5	37.3	38 x 140
8SE12	25mm	3730mm	3° 34'	583	15	1220	1657	74	33	15	4	37.3	38 x 140
8SE14	25mm	4340mm	3° 34'	663	17	1220	1734	74	33	14	4	37.3	38 x 140
8SE16	25mm	4950mm	3° 34'	738	19	1524	1835	74	33	14	3	37.3	38 x 140
8SE20	25mm	6170mm	3° 34'	890	23	1524	1937	74	33	14	3	37.3	38 x 140

- (1) Refer to CINCINNATI Shear Capacity Chart for equivalent capacity thickness based on specific grade of ASTM steels.
 (2) Front gage range based on use of optional front support arms.
 (3) Speed is reduced to 5/6 when machine is equipped for 50 cycle service.

CINCINNATI follows the policy of continuous advancement in product development. For this reason specifications and dimensions are for reference only and may be changed without notice. Foundation plans will be furnished for each new machine installation.

STANDARD CONTROL
POSITION — OTHER
LOCATIONS EXTRA



ENGLISH DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	I-END OF BACKGAGE		J-REAR SAFETY CABLE		WEIGHT POUNDS
									48" RANGE	60" RANGE	48" RANGE	60" RANGE	
4SE06	102-3/4"	14"	91-3/4"	8"	101"	32"	—	—	90-3/8"	102-3/8"	94-7/8"	109-7/8"	20,500
4SE08	126-3/4"	14"	115-3/4"	8"	101"	32"	—	—	90-3/8"	102-3/8"	94-7/8"	109-7/8"	22,800
4SE10	150-3/4"	14"	139-3/4"	8"	101"	32"	3-1/4"	—	93-3/8"	105-3/8"	97-7/8"	112-7/8"	26,000
4SE12	174-3/4"	14"	163-3/4"	8"	110"	32"	9-1/4"	—	97-3/8"	109-3/8"	101-7/8"	116-7/8"	33,200
4SE14	198-3/4"	14"	187-3/4"	8"	110"	32"	15-1/4"	—	102-3/8"	114-3/8"	106-7/8"	121-7/8"	49,600
4SE16	222-3/4"	14"	211-3/4"	8"	110"	32"	21-1/4"	—	—	119-3/8"	—	126-7/8"	48,300
4SE20	270-3/4"	14"	259-3/4"	8"	114-1/2"	32"	31-3/4"	—	—	121-3/8"	—	128-7/8"	72,300
6SE06	106-1/4"	14"	93-3/4"	9-1/2"	110"	32"	—	—	92-7/16"	104-7/16"	96-7/16"	108-15/16"	32,150
6SE08	130-1/4"	14"	117-3/4"	9-1/2"	110"	32"	—	—	92-7/16"	104-7/16"	96-7/16"	108-15/16"	35,350
6SE10	155-1/8"	14"	141-3/4"	10-3/8"	120"	32"	6"	—	92-7/16"	104-7/16"	96-7/16"	108-15/16"	41,500
6SE12	179-1/8"	14"	165-3/4"	10-3/8"	120"	32"	12"	—	96-7/16"	108-7/16"	100-7/16"	112-15/16"	46,700
6SE14	203-1/8"	14"	189-3/4"	10-3/8"	120"	32"	20"	—	102-7/16"	114-7/16"	106-7/16"	118-15/16"	54,900
6SE16	227-3/8"	14"	213-3/4"	10-5/8"	132"	32"	21"	6"	—	114-7/16"	—	118-15/16"	71,300
6SE20	275-3/8"	14"	261-3/4"	10-5/8"	132"	32"	29"	6"	—	120-7/16"	—	124-15/16"	90,300
8SE06	110-1/2"	14"	96-3/4"	11-3/4"	125-1/4"	32"	6-1/2"	—	102-5/8"	114-5/8"	111-1/4"	123-1/4"	48,600
8SE08	134-1/2"	14"	120-3/4"	11-3/4"	125-1/4"	32"	6-1/2"	—	102-5/8"	114-5/8"	111-1/4"	123-1/4"	53,000
8SE10	158-1/2"	14"	144-3/4"	11-3/4"	139-1/2"	32"	9-3/4"	4"	102-5/8"	114-5/8"	111-1/4"	123-1/4"	64,500
8SE12	182-1/2"	14"	168-3/4"	11-3/4"	139-1/2"	32"	19-3/4"	4"	105-5/8"	117-5/8"	114-1/4"	126-1/4"	73,600
8SE14	206-1/2"	14"	192-3/4"	11-3/4"	139-1/2"	32"	23-3/4"	4"	108-5/8"	120-5/8"	117-1/4"	129-1/4"	83,900
8SE16	230-1/2"	14"	216-3/4"	11-3/4"	153"	32"	29-3/4"	11"	—	124-5/8"	—	133-1/4"	98,650
8SE20	278-1/2"	14"	264-3/4"	11-3/4"	153"	32"	43-3/4"	11"	—	128-1/4"	—	137-1/4"	125,400

METRIC DIMENSIONS

MODEL	A	B	C	D	E	F	G	H	I-END OF BACKGAGE		J-REAR SAFETY CABLE		WEIGHT Kg.
									1220mm RANGE	1520mm RANGE	1220mm RANGE	1520mm RANGE	
4SE06	2610	355	2330	203	2570	810	—	—	2300	2600	2410	2790	9300
4SE08	3220	355	2940	203	2570	810	—	—	2300	2600	2410	2790	10,340
4SE10	3830	355	3550	203	2570	810	83	—	2380	2680	2490	2870	11,790
4SE12	4440	355	4160	203	2790	810	235	—	2470	2780	2590	2970	15,060
4SE14	5050	355	4770	203	2790	810	388	—	2600	2910	2710	3100	17,960
4SE16	5660	355	5380	203	2790	810	540	—	—	3030	—	3220	21,910
4SE20	6880	355	6600	203	2910	810	806	—	—	3080	—	3270	32,790
6SE06	2700	355	2380	241	2790	810	—	—	2350	2650	2450	2770	14,580
6SE08	3310	355	2990	241	2790	810	—	—	2350	2650	2450	2770	16,030
6SE10	3940	355	3600	264	3050	810	152	—	2320	2650	2450	2770	18,820
6SE12	4550	355	4210	264	3050	810	305	—	2450	2750	2550	2870	21,180
6SE14	5160	355	4820	264	3050	810	508	—	2600	2910	2700	3020	24,900
6SE16	5780	355	5430	270	3350	810	533	152	—	2910	—	3020	32,340
6SE20	6990	355	6650	270	3350	810	737	152	—	3060	—	3170	40,960
8SE06	2810	355	2460	298	3180	810	165	—	2610	2910	2830	3130	22,040
8SE08	3420	355	3070	298	3180	810	165	—	2610	2910	2830	3130	24,040
8SE10	4030	355	3680	298	3540	810	248	102	2610	2910	2830	3130	39,260
8SE12	4640	355	4290	298	3540	810	502	102	2680	2990	2900	3210	33,080
8SE14	5250	355	4900	298	3540	810	603	102	2760	3060	2980	3280	38,060
8SE16	5850	355	5510	298	3890	810	756	279	—	3170	—	3380	44,750
8SE20	7070	355	6720	298	3890	810	1111	279	—	3260	—	3490	56,880



Cincinnati Incorporated headquarters includes manufacturing facilities, offices and a Technical Center.

A technologically advanced manufacturer of metalworking machinery, Cincinnati Incorporated places its reputation for quality and productivity behind every product.

Cincinnati Incorporated maintains a modern industrial facility where product development, manufacturing, sales and support functions combine to assure complete customer service and satisfaction.

An experienced, competent staff of engineers conducts research and development in new areas of metalworking technology, as well as ongoing improvement programs for current products. CAD/CAM machine design contributes to low-cost customization and shorter deliveries.

Customers may visit the Customer Productivity Center to watch parts being cut and discuss unique applications with Product Specialists to verify production efficiency and savings.

Like all CINCINNATI products, the SE Shear offers exceptional value. To learn more, call your CINCINNATI representative or phone us direct.



The Customer Productivity Center demonstrates today's latest shearing, forming, stamping and laser cutting technologies.

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