SHEAR POWER





SUPERIOR DESIGN FOR SHEARING ACCURACY

ASCURSHEA

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UNIQUE HYDRA-MECHANICAL **ROCKER ARM DRIVE SYSTEM**

This design, unique to the Accurshear, delivers the strength, power and rigidity of the guillotine system and produces the ease of blade clearance adjustment afforded by the swing link design. The hydra-mechanical design utilizes two hydraulic cylinders, interconnected by a thick-walled torque tube, to provide the shearing force of the ram. Like the guillotine design, the Accurshear produces a cutting motion through the material that allows the use of 4-edged blades and a 1-degree relief angle.

ULTRA-HEAVY FRAME STRUCTURE

The Accurshear is designed with a fully welded boxed-in bed table structure that has a high torsion stiffness to balance the torsion load from the cutting force. The maximum rigidity of

> massive table design, ensures constant D blade clearance during the shearing cycle. Blade clearances as low as .002" can be maintained through the entire cut, producing quality shearing on light gauge material. A machined table surface provides a generous, flat work area, and features finger wells to aid in lifting sheets.

CAPACITIES All Accurshear models are rated to shear structural

quality steel with typical mechanical properties up to 80,000 tensile and 44,000 yield strengths.

HIGHEST SHEARING RATING

Recessed finger wells aid lifting sheets

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the unique design, combined with the

WORLD-CLASS BEARINGS

For over 30 years, the unique Accurshear design... coupled with high precision, spherical, self-aligning, maintenance-free bearings, zero clearance fitted on hard chrome shafts... have served to shear millions of pieces of metals in all types of shops from precision sheet metal to heavy plate fabricators.

LOWEST FIXED RAKE ANGLES

The amount of bow and twist produced on a sheared piece of metal is directly related to the rake angle of the

shear. Higher rake angles will produce greater amounts of these distortions in the metal. Accurshears are manufactured with extremely low rake angles to ensure optimum shearing quality with minimum distortions in all gauges of metal.

Model #	Rake Angle
6135	3/16" per ft.
6250	1/4" per ft.
6375	5/16" per ft.
6500	3/8" per ft.
6625	3/8" per ft.
6750	7/16" per ft.
61000	1/2" per ft.

QUALITY SHEARING BLADES

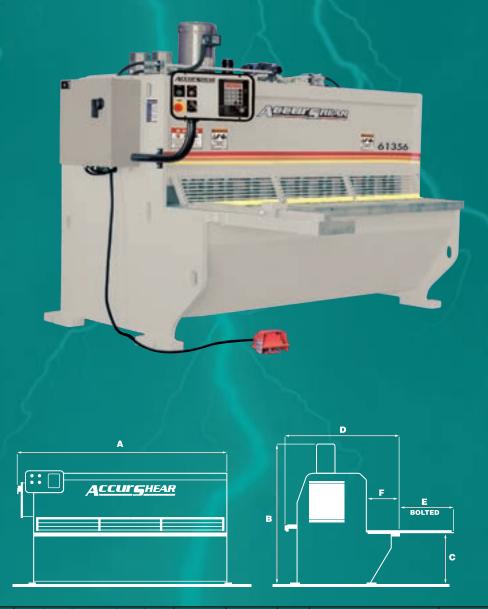
The Accurshear uses the highest quality shear blades, specially developed to provide maximum longevity and to minimize re-sharpening. Depending on the shear capacity, either high carbon, high chrome, or high carbon/shock resisting blades are used for shearing a wide range of metals... such as aluminum, A36 plate, stainless, and titanium. An optional D2 blade, which offers additional hardness, is available as an option on the 6135 and 6250 series.

10 GA. CAPACITY

6135 SERIES

STANDARD FEATURES

- Shear capacity up to 80,000 tensile and 44,000 yield strength.
- Pendant control c/w on/off buttons, mode selector switch, and stroke control dial.
- Backgauge control includes LED display, inch or metric conversion, go-to-position function, 999 pre-select programs, hour meter and stroke counter.
- 36" backgauge travel with automatic swing up backstop at full extension.
- 4-edged blades, top and bottom, modified high carbon, high chrome.
- 3 position footswitch control.
- 4' squaring arm c/w steel rule with 1/16" and 1 mm increments.
- Shadow light and line.
- Hand slots in table.
- Drilled and tapped holes in front of table.



			Knife	Number	Hold-	Cycles P	er Minute	Optional Hi-Speed			Overall Dimensions						Approx.
Model Number	Capacity Inches	Length Feet		Of Hold Downs	down	Full Stroke	Short Stroke	Full Stroke	Short Stroke	Motor H.P.	A	B	c	D	E	F	Approx. Weight Lbs.
61356	10 ga	6	1x3x76	10	10	40	65	n/a	n/a	10	98	80	32	81	25	18	9,000
61358	10 ga	8	1x3x100	13	13	35	60	n/a	n/a	10	122	80	32	83	23	20	11,000
613510	10 ga	10	1x3x124	16	16	30	55	n/a	n/a	10	146	80	32	84	22	21	14,000
613512	10 ga	12	1x3x148	19	19	25	45	n/a	n/a	10	170	80	32	86	21	22	17,000
613514	10 ga	14	1x3x172	22	22	20	40	n/a	n/a	10	193	80	32	88	18	24	20,000

Specifications are subject to change without notice. Capacities are based on 80,000 tensile/44,000 yield strength steel.

6250 SERIES

STANDARD FEATURES

- Shear capacity up to 80,000 tensil and 44,000 yield strength.
- Pendant control c/w on/off buttons, mode selector switch, and stroke control dial.
- Backgauge control includes LED display, inch or metric conversion, go-to-position function, 999 pre-select programs, hour meter and stroke counter.
- 36" backgauge travel with automatic swing up backstop at full extension.
- 4-edged blades, top and bottom, modified high carbon, high chrome.
- 3 position footswitch control.
- 4' squaring arm c/w steel rule with 1/16" and 1 mm increments.
- Manual quick blade clearance adjustment.
- Hand slots in table.
- T-slot in front of table.
- Shadow light and line.
- Oil cooler.



1/4 20 1x3x2

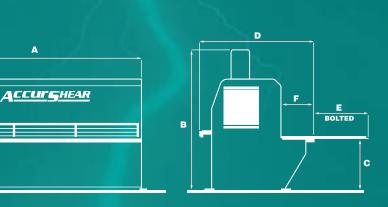
625020

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Specifications are subject to change without notice. Capacities are based on 80,000 tensile/44,000 yield strength steel.

1/4" CAPACITY





fe	Number	Hold-	Cycles Per Minute Optional Hi-Speed						0	Approx.				
ie ies	Of Hold Downs	down Tonnage	Full Stroke	Short Stroke	Full Stroke	Short Stroke	Motor H.P.	A	B	c	D	E	F	Approx. Weight Lbs.
76	10	10	30	55	46	65	20	99	83	32	82	25	18	11,000
100	13	13	26	50	42	65	20	123	83	32	84	23	20	14,000
124	16	16	23	48	38	60	20	147	83	32	85	21	22	17,000
148	19	19	20	46	32	60	20	171	83	32	87	20	23	21,000
172	22	22	17	42	26	55	20	195	89	33	90	18	25	32,000
196	25	25	14	38	21	55	20	219	89	33	92	15	28	39,000
220	28	28	13	34	19	55	20	243	94	33	94	13	30	47,000
244	31	31	12	30	17	50	20	267	94	33	96	11	32	57,000

3/8", 1/2" CAPACITY

6375, 6500 SERIES

STANDARD FEATURES

- Shear capacity up to 80,000 tensile and 44,000 yield strength.
- Pendant control c/w on/off buttons, mode selector switch, and stroke control dial.
- Backgauge control includes LED display, inch or metric conversion, go-to-position function, 999 pre-select programs, hour meter and stroke counter.
- 36" backgauge travel with automatic swing up backstop at full extension.
- 4-edged blades, top and bottom, high carbon, shock resisting.
- 3 position footswitch control.
- 4' squaring arm c/w steel rule with 1/16" and 1 mm increments.
- Manual quick blade clearance adjustment on 650010 and 650012 models.
- Power blade clearance on 650014 and larger models.
- Shadow light and line.
- Hand slots in table.
- T-slot in front of table.
- Ball transfers in table for 6500 Series (optional for 6375 Series).
- Oil cooler.

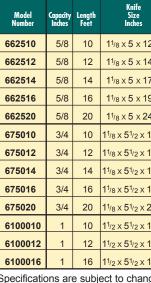


			Knife	Number	Hold-			Optional	Hi-Speed			Ov	erall Di	mensio	ns		Approx.
Model Number	Capacity Inches	Length Feet	Size Inches	Of Hold Downs	down Tonnage	Full Stroke	Short Stroke	Full Stroke	Short Stroke	Motor H.P.	A	B	¢	D	E	F	Approx. Weight Lbs.
63756	3/8	6	1X3X76	10	11	26	46	33	55	30	100	88	32	85	22	21	16,000
63758	3/8	8	1X3X100	13	13	24	46	31	55	30	124	88	32	85	22	21	19,000
637510	3/8	10	1X3X124	16	16	21	44	29	50	30	148	88	32	87	20	23	21,000
637512	3/8	12	1X3X148	19	19	18	40	26	46	30	172	90	33	90	17	26	28,000
637514	3/8	14	1X3X172	22	22	15	36	23	40	30	196	90	33	95	12	31	36,000
637516	3/8	16	1X3X196	25	25	13	33	20	38	30	221	91	34	95	12	31	45,000
637520	3/8	20	1X3X244	31	31	11	25	16	28	30	269	93	36	96	11	32	71,000
65006	1/2	6	1X4X76	10	12	21	42	26	48	40	102	97	34	88	20	22	19,000
65008	1/2	8	1X4X100	13	16	20	42	25	48	40	126	97	34	88	20	22	22,000
650010	1/2	10	1X4X124	16	20	18	40	23	46	40	150	97	34	90	17	25	28,000
650012	1/2	12	1X4X148	19	24	16	38	21	44	40	174	97	34	94	13	28	33,000
650014	1/2	14	1X4X172	22	28	14	36	18	42	40	198	97	34	96	11	30	46,000
650016	1/2	16	1X4X196	25	31	12	34	15	40	40	222	100	36	98	9	32	61,000
650020	1/2	20	1X4X244	31	39	10	32	14	38	40	271	100	36	100	8	33	85,000

6625, 6750, 61000 SERIES

STANDARD FEATURES

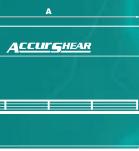
- Shear capacity up to 80,000 tensile and 44,000 yield strength.
- Pendant control c/w on/off buttons, mode selector switch, and stroke control dial.
- Backgauge control includes LED display, inch or metric conversion, go-to-position function, 999 pre-select programs, hour meter and stroke counter.
- 48" backgauge travel with automatic swing up backstop at full extension.
- 4-edged blades, top and bottom, high carbon, shock resisting.
- 3 position footswitch control.
- 4' squaring arm c/w steel rule with 1/16" and 1 mm increments.
- Power blade clearance adjustment.
- Shadow light and line.
- Hand slots in table.
- T-slot in front of table.
- Ball transfers in table.
- Oil cooler.

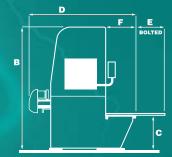


Specifications are subject to change without notice. Capacities are based on 80,000 tensile/44,000 yield strength steel.

5/8", 3/4", 1" CAPACITY







	Number Hold- Cycles Per Minute Optional Hi-Spee								0	Approx.				
	Of Hold Downs	down Tonnage	Full Stroke	Short Stroke	Full Stroke	Short Stroke	Motor H.P.	A	B	c	D	E	F	Approx. Weight Lbs.
124	16	32	14	35	18	40	50	153	105	36	105	16	24	38,000
148	19	38	12	32	16	37	50	177	105	36	107	14	26	45,000
172	22	44	11	29	14	34	50	201	105	36	109	12	28	59,000
196	26	52	9	25	12	31	50	225	106	36	110	11	29	68,000
244	30	60	7	21	9	27	50	274	110	38	111	10	30	90,000
× 124	16	38	14	35	18	40	60	153	106	36	106	15	25	41,000
× 148	19	45	12	32	16	37	60	177	106	36	108	13	27	47,000
× 172	22	52	11	29	14	34	60	201	106	36	110	11	29	67,000
× 196	26	62	9	25	12	31	60	225	106	38	111	10	30	78,000
× 244	30	72	7	21	9	27	60	274	110	38	112	9	31	101,000
x 125	16	46	11	25	13	30	75	156	115	38	110	11	29	65,000
× 149	19	54	9	23	11	27	75	180	115	38	112	9	31	71,000
× 197	26	75	7	20	9	24	75	229	120	38	114	7	33	100,000

Specifications are subject to change without notice. Capacities are based on 80,000 tensile/44,000 yield strength steel.

EASY PUSH BUTTON CONTROLS

IMPROVED PRODUCTIVITY



PUSH BUTTON CONTROL FOR BASIC OPERATION AND BACKGAUGE

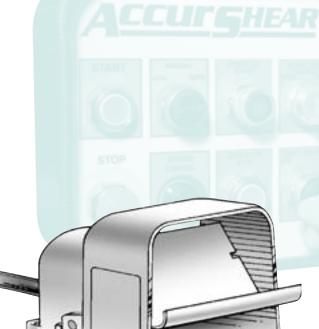
All of the Accurshear's control buttons—including Start/Stop, Mode selector, Stroke control, Stroke counter, and Backgauge selects are located on a front console. To make it readily accessible, the console is mounted to a pendant from the side of the Accurshear. The three mode selects are useful for various shearing applications.

- Jog Mode allows the ram to move downward and stay in position when the footswitch is released. This mode is used primarily when setting and checking clearances along the length of the shear knives.
- Manual Mode allows the ram to move down to the bottom limit setting...completing the cut... then stopping... and only returning upon the release of the footswitch.
- Auto Cycle allows the ram to continuously cycle while the footswitch is engaged.

The backgauge control features a keypad display, LED readout, and 999 pre-select programmable positions. Under normal use, the operator keys in the desired backgauge setting, presses the "Go To" key, and the backstop bar moves to position. The Accurshear may also be programmed for single-step, or sequential shearing. To eliminate the need of resetting backgauge dimensions between shearing cycles the sequential CNC mode permits the operator to set a series of preset dimensions. In this mode, the backgauge will automatically index to the next preset location after each cut.

To ensure high accuracy, the backstop bar actually moves slightly beyond the desired position and then comes forward to eliminate any clearance between the lead screws and nuts.

The shear operator may also choose the backgauge retract feature via the selector switch. This retracts the stop bar once the holddowns clamp the material just prior to the shear cycle to avoid material wedging between the shear knives and stop bar.





HEAVY DUTY BACKGAUGE DESIGN

Strength, rigidity and accuracy combine to produce a solid backgauge with a 36" travel for 61356 through 650020 models, and 48" travel for 662510 and larger models.

High accuracies are achieved via precision ACME lead screws, running on roller bearings, producing longevity and low friction.

EXTENDED BACKGAUGE TRAVEL

A 48" backgauge travel is available as an option in lieu of the standard 36" length for Accurshear models 61356 through 650020.





A footswitch is used to control movement of the ram cycle. The footswitch enables the operator to stop ram movement at any point up or down, and reverse travel.

TIME-SAVING FEATURES

RELIABLE HYDRAULICS PACKAGE

NORTH AMERICAN HYDRAULIC COMPONENTS

The hydraulic reservoir—fitted with motor, pump, valves and cooler—is installed above the ram stiffener to be highly accessible. For safe operation, the shearing cycle is controlled by a double solenoid valve, while a single solenoid valve controls the holddown clamps. An automatic sequence valve will not allow the shear to cycle until holddown pressure is applied.

In addition, the system has a safety hydraulic relief valve in the manifold which protects the shear against overload. The valve is set to shunt hydraulic fluid to the tank if the blade is unable to shear the plate. When the shear is running, the fluid is filtered through a suction screen inside the reservoir and through a micronic filter mounted on the tank top giving continuous filtration. The two main hydraulic cylinders are made of honed seamless tubing, and mated with high quality chrome plated cylinder rods for minimum service.

Hydraulically-powered holddown clamps, made of induction hardened and chrome-plated cylinder rods, are spaced on 8" centers along the entire cutting length of the shear. Close spacing provides sufficient force to prevent movement of materials, as well as twisting or bulging of light gauge metals between the holddowns during the shearing process.



Holddown Clamps

Hydraulic System



SQUARING ARM ASSISTS ACCURATE CUTTING

Located on the left end of the table is the 4' squaring arm with a steel rule measuring in 1/16" as well as 1 mm increments.

The squaring arm has an adjustment for squareness to the knife, which can be locked to regain the position if the arm is temporarily removed for slitting.

An adjustable sliding stop is mounted on the squaring arm for front gauging short lengths.

MANUAL QUICK BLADE ADJUSTMENT

Blade clearance adjustment is an excellent and necessary feature to obtain high shearing quality.

Blade clearance is adjusted manually on Accurshear models 62506 through 650012 by a hand lever on the side of the machine, which is easily rotated for the appropriate gauge of metal.

The 6135 series model has a fixed blade setting, while the 650014 and larger models have a powered system—operated by a selector switch from the front console.

Powered blade clearance adjustment is optional on the 62506 through 650012 models.



OPTIONAL PROTRACTOR ALLOWS SPECIFIC ANGLE CUTS

The protractor simply bolts to the face of the table and can be positioned anywhere along its length. This versatility greatly assists in accurately cutting specific angles. It also serves as a mobile squaring arm... extending blade life by using full blade length for narrow stock shearing.

The protractor is optional on all Accurshear models.



SPECIAL APPLICATIONS

FROM SMALL SHEARS TO LARGE, ACCURPRESS CAN BUILD A SHEAR TO SUIT YOUR NEEDS.



BALL TRANSFERS IN TABLE

Ball transfers mounted in the table are a standard feature on all Accurshear models 6500 and larger. They assist the movement of heavy materials over the table surface and may be ordered as an option on 6135, 6250 and 6375 series models.



FRONT ARMS/RECESSED SCALES

Front arms are available in 2', 4', and 6' lengths and simply mount to the front of the shear table. These arms are t-slotted and equipped with disappearing stops to facilitate front gauging. It's recommended that the arms also be purchased with an inch/metric reading scale recessed into the arm along with a t-slot and recessed scale in the shear table. Ball transfers may be purchased, which are mounted into the arms to provide ease of handling heavy large plates.



HOLDDOWN PRESSURE CONTROL



Some sensitive materials may experience marking under standard holddown pressures. This optional holddown pressure control provides pressure adjustment from 0 to 3,000 psi and is easily adjusted from the operator's normal work station.

HIGH SPEED HYDRAULIC PACKAGE

This system offers approximately 30% faster cycle times than the standard package. Horsepowers and pump volumes increase with this option. This option is not available for the 6135 series models.

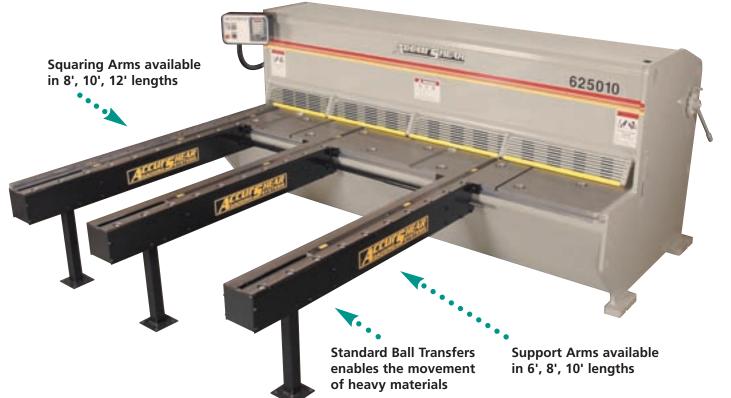
HOLDDOWN PADS

Holddowns can be equipped with urethane pads to eliminate marking of aluminum or other sensitive materials.

LONGER SQUARING ARMS

A longer squaring arm may be required to accurately square larger sheets. 6', 8', 10' and 12' arms are available as an option. The squaring arm length is measured from the cut line. Each arm includes a recessed steel rule measuring 1/16" and 1mm increments... plus one adjustable sliding stop. Ball transfers mounted into the arms are a recommended option for the 6500 series and larger models.

ACCURSHEAR CNC FRONTGAUGE



ACCURACY

- +/- .003" positioning accuracy
- High accuracies achieved with precision ball screws

PRODUCTIVITY ADVANTAGES

- Maximizes material usage
- Reduces handling and thereby increases efficiency
- Substantially increases shearing accuracy
- Reduces personnel needs i.e: can do with one operator, what may take up to three previously
- Eliminate problems associated with sheet sag when measuring via a backgauge
- Drive system operates at over 900 in/min
- Easy mechanical adjustment for calibration

HEAVY DUTY VERSION

A heavy duty version of the CNC frontgauge is offered for Accurshear models 65008 and larger. To handle the weight of heavier steel plates this system is constructed with larger components such as:

- Ball screws
- Bearings
- Ball transfers
- Finger stop and finger rail assembly







STANDARD PNEUMATIC FINGERS

 Heavy-duty steel construction, 1" wide, and air activated; only desired finger raises at position to reduce scratching of workpiece and minimizes operator error.

SQUARING ARM

- Normally located on the left side of the shear, the squaring arm is fully adjustable via a machined bar bolted to the top surface to allow for accurate shearing.
- A stainless steel ruler is recessed into the arm and table to enable easier measurement.
- Ball transfers are mounted into the squaring arm for ease of material handling.
- Squaring arms can also be ordered for the opposite end of the shear table.

CNC CONTROL

- Integrated control allows for operation of both frontgauge and backgauge from one control.
- Digital display can toggle between frontgauge and backgauge as required.
- Digital readout to .001"
- Retract function allows the stops to retract (backgauge or frontgauge) so that material doesn't wedge between the shear knives and the fingers.
- Programmable auto-step can switch between frontgauge and backgauge as required.
- 999 pre-select backgauge/frontgauge settings.

REDUCE MATERIAL HANDLING

SHEARING SAFETY OPTIONS

PNEUMATIC SHEET SUPPORT

A sheet support system is a recommended option for providing an accurate dimension when supporting lighter gauge material parallel with the shear table and gauge bar. Light gauge material will quickly droop once it is pushed very far from the shear knife edgeand consequently, the dimension on the drop off piece will not be consistent with the backgauge readout.

Two styles are offered and both simply roll in under the shear ram, and are operated via pneumatic power and an electronic circuit.

Table Style is recommended when support is necessary for very light gauge material and is offered on Accurshear models 61356 through 625012. It consists of a table which rises parallel to the bottom of the backstop bar to support the material for accurate measurements. Once the holddowns clamp the metal, just prior to the shear cycle, the table automatically lowers itself, allowing the material to slide off. Once this is complete, the table rises to the "up" position again in preparation for the next cut.

Arm Style is recommended when shearing material 20 gauge and heavier. Material lighter than 20 gauge will still droop between the rows of arms resulting in an inaccurate backgauge measurement. This system incorporates three rows of arms which are in the "up" position prior to the shear cycle. They support the material parallel to the gauge bar for an accurate measurement.

The backgauge dimension determines the number of rows required to support the material. For example, at the full 36" backgauge setting, all three rows of support arms will be up. At the 15" setting, only one row of arms will be engaged. Once the holddowns clamp the material, just prior to the shear cycle, the arms fall, allowing the material to slide off the table. After the cut is completed, the arms immediately rise to the up position in preparation for the next cut. Either support system can be turned on or off at any time by using the select switch on the control console.



Table Style Sheet Support

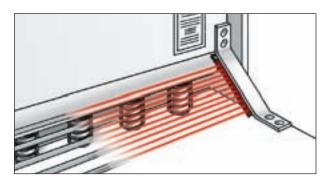


Arm Style Sheet Support

To enhance safe shearing practices and reduce risk of parts binding, cut parts must be removed consistently from the Sheet Support System. Refer to pages 18-19 for consideration of the Accurveyor option for the most automatic part handling system.

ROLLER TABLE

The non-powered roller table featured below is an excellent option to help in the removal of sheared metal. The table is manufactured in various lengths and is positioned under the Accurshear ram to enable sheared pieces to roll to the back of the shear via the heavy duty rollers for quick and easy access. Elimination of the awkward removal of sheared pieces that typically fall directly under the ram greatly increases shear efficiency and reduces cycle time.



LIGHT CURTAIN GUARDING

To enhance safety and allow an operator to position smaller pieces of metal into position for shearing, a light curtain may be purchased in lieu of the finger guard. The Accurshear will NOT cycle if an operators hands interferes with the light curtain beam. This curtain satisfies the appropriate OSHA and ANSI regulations for safety requirements.





REAR GUARDING

Mechanical Rear Guarding complete with light curtain is also available to enhance safe shearing operations..

CONVEYOR STACKER SYSTEM

CONVEYOR/STACKER CONTROL

Accurshear system operates directly from the control panel

CONVEYOR/STACKER COST ANALYSIS

Satisfied customers report a significant reduction in labor costs with their new conveyor/stacker from Accurshear.

A time study showing a single shear operator, who shears the required material, then gathers the material from behind the shear, stacks the plates, and separates the trim cuts, produced the following time and cost breakdown (using a \$30.00 per hour labor cost).

Infeed - time 30% (cost \$9.00)

Actual Shearing - time 5% (cost \$1.50)

Outfeeding and Stacking - time 65% (cost \$19.50)

Based on this time study, the shear is only operating 35% of the time. As a result, an automatic conveyor/stacker can deliver an excellent return on investment by reducing material handling costs.

HOW IT WORKS

The conveyor supports material between the bed and the backgauge by pneumatic cylinders at the shear table level. After the shear strokes, the material support arms drop out of the way, allowing the sheared material to fall on to the conveyor belts. After the material moves out of the shear housing, the support arms return to the up position.

Trim Cuts are separated from the stack material by a door located at the discharge end of the conveyor. The operator can open the trim separator door by using the foot pedal, or via a switch on the backgauge control. The separator door remains open until the shear strokes, and the trim falls into the scrap container.



The stacker collects material discharged from the conveyor. Adjustable back stops keep the material stack square. There is also a movable squaring plate and a hinged tamper which square material from the sides.

OPERATOR EFFICIENCY

It is estimated that material handling consumes up to 95% of a shear operator's time. The Accurshear conveyor/stacker helps to eliminate much of this time by efficiently separating the trim cuts from the finished pieces, and then stacking them neatly at the rear of the machine. The payback time on this system is fast. Take a moment and consider some of the many benefits described below.

WORK SUPPORT ARMS

- Improves accuracy because the sheet is supported parallel to the table
- Eliminates the need to manually support light gauge sheets from behind the machine
- Holding material level with the shear table enables accurate backgauge readings
- The supports drop systematically with the shear cycle thus holding the material and reducing plate tear

TRIM CUT SEPARATOR

- Separates edge trim from production blanks
- Opens via the Conveyor foot switch or front console button

STACKER ••••••

• Eliminates the need for a person behind the shear to do the stacking

• Stacks the material neatly for removal by an overhead crane, fork truck or pallet jack



CONVEYOR

due to fatigue

• Reduces backgauge damage from cut material •

• Provides safer working conditions

• Eliminates production slowdown

for operators and helpers

• Air operated tampers to facilitate the stacking of sheared pieces





Edge Your Edge for Enhanced Productivity



Accurpress

North America's #1 Selling Press Brake

Accell Precision Forming System



Accurpress Tooling

INTED IN USA MAY 2014

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