

SHEAR CONVEYORS AND STACKERS



Cut Your Shearing Cost, While Improving Production and Efficiency.



SHEARING OPERATIONS

Reduces time spent separating material by hand. Conveyor has a Trim Separator. Once the Separator has been actuated, it will open, exposing the Scrap Container. You are now ready to make your trim cut. After the cut has been made and the scrap conveyed out and has fallen into the Scrap Container, the Separator will automatically close and you are now ready to continue shearing material to size.

MATERIAL SUPPORT ARMS

Arms support material at table level making gauging material easier and faster. Support arms work in approximately 12" intervals in the back gauge range.

STACKER

Unlike the conveyor, the Stacker is not always a usable item. A Stacker's ability to serve you largely depends upon types and quantity runs of material. However, should the application be present, a Stacker can eliminate almost all your finished part handling time behind the shear.

BELT TRACKING

Depending upon application, belts can come with a V-Guide Tracking System attached to the underside of the belt. Pulleys are also grooved to accept the V-Guide Tracking Mechanism. This system gives you the quietness of a belt conveyor and the positive tracking system of a chain and sprocket.

P.O. Box 363, Batavia, Ohio 45103 Ph. (513) 724-3715 Fax (513) 724-1336

"The people who can help you with your material handling needs"

Fact!

A note about our references. Several of the country's leading shear manufacturers have chosen <u>Met-Fab</u> to supply them with <u>Conveyor / Stacker Systems</u> which they sell with their units.

Reliability, Experience and Service speaks for itself.

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Met-Fab Shear Conveying System

Justification for a Conveyor Stacking System

- 1. A very large percentage of your shearing time is spent handling material. By decreasing your material handling time, you increase the productivity of your shear.
- 2. A labor reduction cost of up to 50% can be saved by reducing the shearing time.
- 3. Safety is another feature of the material support system. The sheet to be sheared is automatically held up at table height, rather than by hand.

Equipment Description

<u>Conveyor</u>: Supports material to back gauge range of 36" (see options) by pneumatic cylinders at shear table level. As shear begins to stroke, material support arms or rails (see options) drop out of the way allowing sheared material to fall onto conveyor belts. The conveyor belts, moving at approximately ______ feet per minute, move material out of the shear housing and the support arms return to the up position. This unit is powered by a ______ horsepower motor. The number of material support arms that will be in the up position is determined by the position of the backgage through a series of limit switches that will be mounted to the backgage.

<u>**Trim Cuts</u></u> : trim cuts can be separated from the stack material by a door located at the drive, or discharge end, of the conveyor. The operator can open the trim separator door by using the foot pedal provided. The separator door will remain open until the shear strokes and enough time is allowed for the trim to fall into the scrap container, also provided.</u>**

<u>Stacker</u> : As the material is discharged off of the conveyor, the forward motion will send the material down into the stacker unit. Adjustable front and backstops are provided to square the material front to back. There is movable squaring plate as well as a movable hinged tamper which will square the material right to left.

<u>Power and air requirements</u>: The unit can be wired for 440v or 220v single or three phase electric. Approximately 15 CFM at 80 PSI will be required to operate the pneumatics of the system.

Optional Equipment

- Electrical Counter which is wired into the trim separator electrical circuit, providing an accurate count on productive parts only.
- Remote On-Off switch for a station at the rear of the conveyor to control the conveyor belts.
- Additional row (s) of support arms. 1 row for approx. each 12" of backgage range greater than 36".
- Mar-Free conveying for aluminum, stainless, and pre-paint material.
- Rail Support System, for 100% support at each rail location of thin gage material.
- Additional scrap container.

Pricing :

•	Conveyor	\$
•	Stacker	\$
•	Counter	\$
•	Remote	\$
•	Additional scrap container	\$
•	Additional rows support arms	\$
•	Mar-Free conveyors 10' and under	\$

<u>Warranty</u>

Met-Fab will warrant all company fabricated parts for a period of 6 months or 2000 machine hours, whichever comes first from the date of installation. All commercial purchased components will be covered by the manufacturer's warranty. All components having malfunctioned are to be returned to Met-Fab for failure evaluation.

Terms and Conditions

Terms : 1/3 at time of order, 1/3 on shipment, 1/3 due 30 days after shipment.

Shipping : _____to be determined at time of order_____ Shipments : F.O.B. Batavia, Ohio.

Installation and Training : Normal installation (up to 6 hours) is included in the price of the conveyor. A Met-Fab representative will be available to supervise installation and to train. <u>Travel / living expenses are not included in conveyor price.</u>

<u>Cancellation</u> : Once orders are accepted, they are not subject to cancellation to protect seller from loss.

Errors are subject to correction.

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SHEAR PRODUCTIVITY ANALYSIS

The most basic question asked by a customer studying the purchase of a conveyor / stacker is "Will it save time and money?" the following study will answer that question.

For the purpose of simplicity, let us assume a burdened labor cost of \$30.00 per hour.

It is obvious that to reduce the cost per hour in a shearing operation, the area to start is the labor on the discharge or outfeed operation of the shear.

In many shearing operations today, on person (or more) is behind the shear. While in operation, they catch the blank after it is sheared, puts it in a stack, and removes the scrap. Using the Met-Fab Conveyor / Stacker System, this is all done automatically, thereby eliminating the person (or people) behind the shear for stacking and scrap separator purposes. Removal of this person would effectively save \$30.00 per hour.

Another method of operation is where the shear operator shears several blanks of the same size, then goes behind the shear, gathers and stacks the sheared blanks, and separates the trim cuts. A time study of this type of operation showed the following breakdown:

Outfeed and Stacking	65%
Actual shearing time	5%
Infeed	30%

Using our established of \$30.00 per hour, the breakdown is:

Outfeed	39 min.	\$19.50
Shearing	3 min.	\$1.50
Infeeding	18 min.	\$9.00

Based on the time study, the shear is only operating 35% of the time. Clearly, the addition of a Met-Fab Conveyor / Stacker System would eliminate the shear down time and increase production significantly.

The replacement of the shear operator's helper with a Met-Fab Conveyor / Stacker System is desirable because the Conveyor / Stacker System increases safety, increases production, and reduces production cost.

The main features of a Conveyor / Stacker System are:

Conveyor

- Gives safer working conditions around the shear for operators.
- Eliminates production slow down due to fatigue of workers.
- Backgage damage is eliminated. Many backgages have been wrecked because cut material is stacked up so high, that the backgage hits the stack, resulting in damages up to several thousands of dollars. Naturally when this happens the down time on the shear represents a considerable dollar loss in productivity, not to mention delayed customer deliveries.

Work Support Arms

- Give greater backgage accuracy because the sheet is supported parallel to the floor.
- Eliminates the need for a person behind the shear to support light gauge sheets to ensure the material engages with the backgage.

Trim Cut Separator

• Automatically separates edge trim from production blanks, therefore material handling labor.

<u>Stacker</u>

- Eliminates the need for a person behind the shear for stacking purposes.
- Provides a neat, even stack that can quickly be removed by a overhead crane, fork truck or pallet jack.

Overall Benefits

- Provides increase in profits by reducing labor and increasing shear usage.
- Met-Fab's Conveyor is quiet when operating and will not contribute to factory noise level.

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BELT AND PULLEY SYSTEM vs. CHAIN AND SPROCKET SYSTEM

The following is a comparison of our belt and pulley system as opposed to the chain belt and sprocket system.

MET-FAB	CHAIN BELT COMPETITOR
1. Our belt and pulley system is quiet	1. Chain and sprocket system is extremely noisy and will significantly increase the sound level in your factory.
2. Belts cover 75% of the conveyor	2. Chain cannot pick up small trim
surface area, allowing for greater	efficiently, allowing them to drop through
efficiency by positive traction in	the conveyor, necessitating the removal
conveying blanks and trim cuts of all	of the conveyor periodically for cleaning
sizes.	
3. Belts are non-marring and very	3. Anti-mar protection is offered as an
durable. Belting is made of polyester and	option. Rubber bonded to the chain belts
nylon yarns interwoven and completely	is not as durable and rugged as urethane
impregnated with urethane.	belts.
4. Belts cannot be damaged by the	4. Chains allow cutting to catch between
cuttings being conveyed.	the plates and jam or even break the chain
	belt or sprocket.
5. Belts provide coverage on all surface	5. Chain covers only a limited area.
areas, except for the area needed for	Chains must be arranged or additional
retraction of the support arms.	chains added (at additional cost) to meet
	Customer's requirements.
6. Belts provide positive traction on all	6. Chain promotes slippage of plates,
size sheets under all conditions.	especially when oil and grease are present
	on contacting surfaces.
7. The adjustment or repair of a worn belt	7. The breakage or jamming of a chain is
can be foreseen and put on a planned	a sudden and unforeseeable occurrence
maintenance schedule.	resulting in shear down time and
	production delays.

MET-FAB	CHAIN BELT COMPETITOR
8. Belt tracking adjustments and belt	8. Replacement and repair of a chain is
replacement are quick and easy.	difficult, due to the weight of the chain
	and the position of the pins.
9. Trim cut separator and container are	9. Trim separator and container are
standard equipment.	offered as optional equipment.
10. Operator control box and trim	10. Operator control box and trim
separator foot switch are standard	separator foot switch are offered as
equipment. They are remote for locating	optional equipment.
at the front of the shear.	
11. Stacker over arm bar allows quick	11. Backstops must be adjusted
adjustment of all the backstops at one	individually to accommodate different
time.	size blanks.
12. Stacker backstops are quickly and	12. Backstops are floor mounted and must
easily lifted up so that full stacks can be	be unlocked and removed individually in
removed.	order to remove a full stack.
13. Stacker backstops are quickly and	13. Backstops are floor mounted,
easily moved from side to side to	resulting in extended set-up time in order
accommodate different stack sizes.	to accommodate different stack sizes.
14. Standard stacking range is 3" by 12"	14. Standard stacking capacity is 36" by
to 48" by length of the shear.	the length of the shear; 48" capacity is
	optional.

MET-FAB

CHAIN BELT COMPETITOR

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SQUARING SHEAR SHEET SUPPORT

The Met-Fab Sheet Support offers a reliable source of support for more accurate backgaging and ease of material handling.

Our Sheet Support System can be designed and manufactured to ease material handling on almost any shear. Plus, there is not any modification to the backgage necessary. The unit requires approximately 80 psi of shop air and can either be plugged into a 110 v. outlet or wired from the shear transformer.

As the backgage moves in and out it actuates a series of limit switches mounted on the backgage. This will only allow the arms needed for support to raise. If the shear it is mounted to will allow enough slope for the sheared material to slide off, the arms will automatically raise and hold material up to table height after each stroke of the shear. If there is not enough slope, the operator will need to press a reset button on our control box to raise the arms after each stroke. This will allow the operator to insure the sheared piece will not be raised by the arms into the backgage. The top of the Sheet Support is covered with a diamond plate which reduces friction and allows the sheared piece to slide off easier.



Reduce Shearing Time While Increasing Production AND Improve Working Conditions for Your Shearing Operations.



MET-FAB CONVEYORS AND STACKERS

For Your Material Handling Needs.



INSTALLATION

Installation and Training are included in the price of your conveyor stacker unit. Plant air of at least 80 psi and 220/440 V outlet are all that is necessary to mate the conveyor and stacker to your shear.

MAINTENANCE

Maintenance of your unit is very simple. Occasional lubrication and belt adjustment is all that is necessary.

MET-FAB FABRICATING & MACHINE INC.

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Press Brake Work Support

The Met-Fab Press Brake Work Support System offers many advantages to your press brake:

- Increase efficiency and production
- Significantly reduce labor input
- Eliminate crane time when forming heavy pieces of material
- Parts spoilage due to back bending is eliminated
- Operator skill requirements are reduced
- Safety is appreciably improved
- Only recommended use on Hydraulic Press Brakes

The Work Support arms/table follow the long flange of the work piece thru the entire forming cycle-UP and DOWN. A smooth, fast response Hydraulic System operates the arms. With the Work Support in the down position, it serves as a table to aid in positioning the work piece prior to forming. The unit is on heavy duty casters and can easily be moved out of the way with the use of Quick-release pin type assemblies to attach unit to brake.

INTERFACING & TIMING

It is interfaced with the brakes footswitch circuit as an enabling circuit so that if the operator releases the footswitch, the work support will stop its motion. There are two limit switchs that need to be mounted to tell the support when to start up and when to stop. A separate footswitch is supplied to enable the operator to let the support down. The speed at which the support moves is determined by flow controls mounted to the hydraulic valve on the unit.

A Met-Fab representative is available to come and set-up machine on location, however, travel & living expenses are not included in the price and must be paid by the customer.

Capacity: Contact factory For more specific information, please call.