

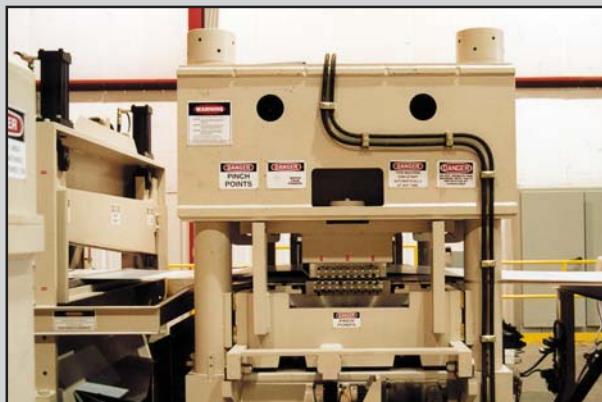
# NEWS RELEASE

## J&F Steel Installs Precision 72" Multi-Blanking Line

Burns Harbor, IN – J&F Steel Corporation, a multi-facility carbon steel coil distributor and coil processor has installed a new state-of-the-art Braner/Loopco Cassette Leveler Servo-Feed Precision Multi-Blanking Line in its newly expanded flagship facility in Burns Harbor, IN. The new Multi-Blanking Line has the ability to convert 60,000# bare and critical surface coated cold rolled steel coil in gauges from .015" through .135" into 72" wide x 12' long pattern sheets or precision multi-blanks as small as 5" wide x 12" long. In addition to the new Multi-Blanking Line, the J&F facility contains four (4) Braner/Loopco Turret Head™ slitting lines (72", 60", 52", & 24"), and three (3) Braner/Loopco "Turret Stacker" Automatic Packaging Lines.



**Hydraulic "Cassette" Leveler:** The new Multi-Blanking Line is equipped with Braner/Loopco's precision "Cassette" Leveler that employs advanced electro-hydraulic motion-control technology to position 9 adjustable back-up flights and 17 work rolls to produce *panel-flat* sheets and blanks. Hydraulic cylinders with linear electronic transducers (*rather than mechanical jack-screws and sliding wedges*) position the Leveler back-up flights and work rolls to correct strip shape defects such as coil-set, wavy-edge, and center-buckle. Computer controls are employed to independently position the 18 back-up cylinders. Independent control of the entry and exit ends of the back-up flights allows the entry work rolls to be positioned and contoured for aggressive shape correction at the entry end while maintaining parallel exit end work rolls. This feature allows precise shape correction without overworking the strip. Independent positioning of the back-up flights across the work roll face allows the work rolls to be "tilted" from side-to-side to correct asymmetrical shape defects.

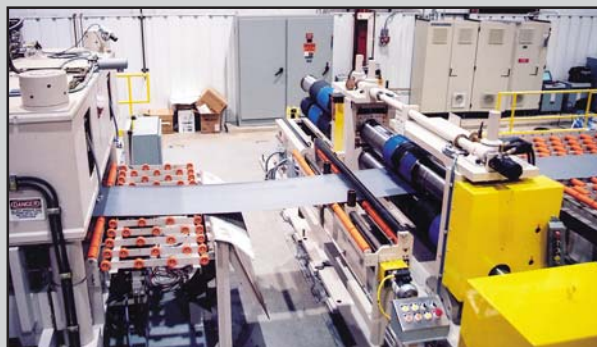


The Leveler controls feature full automatic Leveler set-up based upon gauge and yield strength inputs, a computer memory that recalls previous Leveler set-up parameters (*saving set-up time when running partial coil orders*), and a calibration mode that *automatically calibrates* the Leveler after roll grinding or periodic maintenance.

The J&F Leveler is equipped with two (2) interchangeable "Cassettes": a 1.250" x 6-Hi Cassette, and a 1.750" x 5-Hi Cassette. The smaller Cassette is utilized to process a gauge range from .015" to .060", while the larger Cassette is utilized for leveling .030" through .135" materials. In addition to providing an extended leveling range, the Cassette Leveler design simplifies Leveler maintenance by allowing work roll and back-up maintenance to be accomplished outside the Leveler frame rather than inside the frame where many parts are inaccessible. The Leveler Cassettes are installed and removed from the Leveler frame via an "Indexing Cassette Injector Car". The Injector Car allows one Cassette to be ejected and another installed in about one-minute. A Powered "Cassette Opener" attached to the Injector Car simplifies maintenance by opening an off-line Cassette like a "book", exposing the work rolls and back-ups.



**Precision Multi-Blank Slitter:** The J&F Multi-Blanking Line employs a quick-change two-head "Turret Head"™ slitter located immediately after the Cassette Leveler (*before the looping pit*) to slit the leveled material into multiple strips.



The Turret Head slitter is an accurate, reliable, and maintenance-free slitter that with its precision shimless tooling consistently produces strips to  $\pm 0.002$ " width tolerance. While most multi-blank slitters require that the line be shut down during the preparation of a slitter set-up, the Turret slitter

allows J&F to prepare the next multi-blank slitter set-up *while the line is running*. The ability to prepare the next set-up while the line is running significantly improves multi-blanking line productivity by virtually eliminating down time related to slitter set-ups. Once the off-line slitter set-up is completed, production down time related to changing slitter heads is one-minute.

Many multi-blanking slitters are installed *after* the looping pit, slitting the strip in a *start-stop* cycle synchronized with the strip feeder cycle. By comparison, the J&F slitter is installed *before* the looping pit, slitting the strip at a constant line speed synchronized with the Cassette Leveler. By slitting at a uniform non-stop line speed, J&F is able to avoid problems associated with knife slippage and produce uniform high-quality close-tolerance slit edges on all multi-blanks.



To minimize slitter set-up time, the J&F Turret Head slitter employs a custom designed precision shimless tooling package specifically designed for side trimming and the production of multi-blanks 5" and wider. The Turret Head slitter, with the custom tooling package, is able to produce precise  $\pm .002$ " slit width tolerances while also allowing multi-blank set-ups to be accomplished in 1/4 to 1/3 the time normally required to complete a typical coil slitter set-up. Depending upon the number of cuts and widths, coil slitter set-ups can take as long as 45 minutes to complete. But with the quick loading and lightweight tooling design of the Turret slitter plus the advantage of the custom multi-blank tooling, J&F can finish a typical multi-blank set-up in about 15 minutes. Special spacers that are 53% lighter than conventional spacers are a key element in the custom-tooling package, and the lightweight spacer design makes extra-wide spacers feasible. Employing extra-wide spacers to generate 2 to 5 multi-blank strips dramatically reduces spacer "piece-count" and set-up time is reduced. For example, a shimless coil slitter set-up for eleven 3.125" and eight 2.875" x .030" strips would need 283 spacers and about 45 minutes to set-up. With J&F's custom tooling package, a multi-blanking set-up for one 30.000" and one 29.500" x .030" blank would need only 43 spacers. 43 spacers versus 283, or 1/6<sup>th</sup> the number of pieces. Since set-up time is directly proportional to the number of pieces that have to be loaded and removed, it makes sense that less pieces means less set-up time. The J&F Steel Turret Head slitter equipped with the multi-blank tooling package can be re-tooled for most orders in 15 minutes. Since it takes more than 15 minutes to process

any size multi-blanking run, the slitter set-up can be finished before it is needed. More importantly, J&F is able to re-tool for the next order while the line is running, so no production time is lost.

**Precision Electronic Servo Feed:** The J&F Multi-Blanking Line employs a Precision Servo Feed to feed and measure strips for cut-off. The Servo Feed uses high-traction non-marking feed rolls driven by a precision electronic AC vector servo system to feed and measure the strips. The feed rolls are full-width with back-up rolls that eliminate feed roll deflection. A state-of-the-art motion control system capable of producing consistent sheet and blank length tolerances of  $\pm .005$ " is employed for feed length measurement.



The electronic motion control receives feed roll position data from an electronic encoder, and the position information is instantly transformed into accelerate, decelerate, and full stop commands based upon the feed length. The motion-control system automatically computes the ideal production speed based upon the part length entered into the operator data panel. An adjustable acceleration/deceleration control is provided to compensate for various material surface conditions.



Finished pattern sheets and multi-blanks are packaged in a Programmable Air Float Stacker. Multiple blanks are separated in compartments formed by steel ribbon dividers that are automatically positioned to match the blank sizes via electronic servomotors. Defective sheets and blanks can be diverted on-the-fly and sent from the Stacker to a scrap reject station. Completed stacks are discharged from the Stacker and weighed prior to removal.



Braner USA, Inc., 9301 W. Bernice St., Schiller Park, IL 60176  
Phone (847) 671-6210 Fax: (847) 671-0537  
www.braner.com



**J & F STEEL CORPORATION**

310 TECH DRIVE  
BURNS HARBOR, IN 46304  
PHONE: (219) 764-3500  
FAX: (219) 764-0073