BENDING FORCE
Bending tonnages for other materials as compared to mild steel on chart are as follows:
- Soft Brass - 50% of tonnage shown
- Aluminum Alloys (Heat Treated) - same as steel
- Stainless Steel - 50% more than shown
- Soft Aluminum - 50% of tonnage shown
- Chrome Molybdenum - 100% more than shown

Steels greater than 60,000 PSI requires additional tonnage and/or wider die openings.

- Soft Brass - 50% of tonnage shown
- Aluminum Alloys (Heat Treated) - same as steel
- Stainless Steel - 50% more than shown
- Soft Aluminum - 50% of tonnage shown
- Chrome Molybdenum - 100% more than shown

All of the above bending tonnages are nominal and represent average conditions. These values are dependent upon the radii of the dies, the yield strength of the material, the temper of the material, direction of grain, etc. Therefore, a safety factor of at least 20% should be added when selecting a press for a given job.

BENDING TONNAGE CHART

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<th>.125</th>
<th>.0625</th>
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Approximate pressure in tons/linear foot required to make 90° air bend on mild steel (60,000 PSI tensile strength) with various width die openings.

APPROXIMATE PRESSURE IN TONS/LINEAR FOOT REQUIRED TO MAKE 90° AIR BEND ON MILD STEEL (60,000 PSI TENSILE STRENGTH) WITH VARIOUS WIDTH DIE OPENINGS

| WIDTH OF V DIE OPENING | 75 | .75 | 1 | 1.125 | 1.25 | 1.5 | 2 | 2.5 | 3 | 3.5 | 4 | 5 | 6 | 7 | 8 | 10 | 12 |
|------------------------|----|----|---|-------|------|----|---|-----|---|-----|---|---|---|---|---|---|----|----|
| 1                      | 1.3 |     |   |       |     | 1.5 |   |     |   |     |   |   |   |   |   |   |   |   |
| 2                      | 2.2 | 1.8 | 1.5 |     |     | 3.5 | 3.0 | 2.5 | 2.1 | 1.8 |   |   |   |   |   |   |   |   |
| 3                      | 3.5 | 3.0 | 2.5 | 2.1  | 1.8 | 8.0 | 6.5 | 5.6 | 4.6 | 3.7 | 3.2 |   |   |   |   |   |   |   |
| 4                      | 11.1 | 9.0 | 7.5 | 6.3  | 5.5 | 4.4 | 2.9 |     |     |     |   |   |   |   |   |   |   |   |
| 5                      | 14.5 | 11.9 | 9.9 | 8.5  | 7.3 | 5.8 | 4.0 |     |     |     |   |   |   |   |   |   |   |   |
| 6                      | 27.4 | 23.1 | 19.3 | 16.4 | 14.3 | 11.2 | 7.5 | 5.7 | 4.4 |   |   |   |   |   |   |   |   |
| 7                      | 39.4 | 33.3 | 29.5 | 22.7 | 15.4 | 11.4 | 9.0 | 7.4 | 6.1 |   |   |   |   |   |   |   |   |
| 8                      | 50.4 | 43.9 | 37.0 | 29.6 | 19.7 | 13.9 | 11.5 | 10.5 | 9.9 | 7.7 |   |   |   |   |   |   |   |
| 9                      | 61.1 | 52.3 | 45.0 | 35.4 | 28.8 | 22.4 | 17.3 | 14.8 | 11.2 |   |   |   |   |   |   |   |   |
| 10                     | 86.2 | 73.6 | 68.8 | 53.7 | 43.3 | 33.3 | 27.4 | 23.3 | 16.9 |   |   |   |   |   |   |   |   |
| 11                     | 110.0 | 96.2 | 90.0 | 81.0 | 68.7 | 55.3 | 43.6 | 36.5 | 27.1 | 21.0 |   |   |   |   |   |   |   |
| 12                     | 137.0 | 114.0 | 104.0 | 90.0 | 76.6 | 66.4 | 52.0 | 39.7 | 31.6 |   |   |   |   |   |   |   |   |

APPROXIMATE PRESSURE IN TONS/LINEAR FOOT REQUIRED TO MAKE 90° AIR BEND ON MILD STEEL (60,000 PSI TENSILE STRENGTH) WITH VARIOUS WIDTH DIE OPENINGS
Robust torque tube design with a link system that connects both sides of the ram and rotates to keep the ram parallel during the bending process. This machine fits well in applications not requiring sophisticated control or back gauge options for a solid press brake offering.

ROBUST & ECONOMICAL

Estun E21 CNC Control
X-axis Back gauge
Starter set of press brake tooling
(upper punch with multi v-die)

PIRANHA ADVANTAGE
STANDARD FEATURES

- Light Curtain
- Side & Rear Interlock Safety Gates

Please see specific quote for individual machine specifications.
High end precision press brake with a long list of standard features such as integrated bed crowning, Delem Controls, as well as having the option for add many upgrades. Fits shops requiring high end control features and multi axis back gauges for bending complex parts.

PIRANHA ADVANTAGE

STANDARD FEATURES

- DA58 CNC control
- Ram repeatability .0004"
- Easy Crown Automated Hydraulic Bed Crowning with 3 piece bed design
- Fiessler AKAS-LC II Laser Safety Curtain
- Hoeldiger Hydraulics from Germany
- Heidenheim Scales from Switzerland and Telemechanique, Siemens Electrics with Delta or Panasonic Drives & Motors
- Side & Rear Safety Gates
- X & R Back Gauge

STANDARD SAFETY EQUIPMENT

- Fiessler Laser Curtain
- Side Safety Gates
- Rear Safety Gates

OPTIONAL UPGRADES

- Controls: DA68T or DA69T
- Back Gauges: Z1 Z2 (up to 6-axis)
- Offline Software: Profile-T 2D

Please see specific quote for individual machine specifications.
TANDEM PRESS BRAKE

OPTIONAL: SHEET FOLLOWERS
This economically priced hydraulic guillotine shear comes standard with many features not normally found at this price point such as CNC controlled blade gap and rake angle. This all works together to get the best quality sheared parts every time on a wide range of materials.

PIRANHA SHEAR
HYDRAULIC GUILLOTINE
1/4" - 1" Capacity

TOUGH. ACCURATE. RELIABLE.

Delem DAC360s Control
Guillotine design with a 3-point Roller Gib System
Standard 39" Travel Back Gauge with retract function
CNC Rake Angle Adjustment
CNC Blade Gap Adjustment
CNC Stroke Adjustment
Bosch Rexroth Hydraulics with accumulator return
High Quality Alloy Segmented Blade

Please see specific quote for individual machine specifications.