

SOLUTION



Press brake with Automatic Tool Changer
and AFH-ATC Tooling

HRB ATC

SERIES

HRB-1003ATC/2204ATC

Bending



The Engineering AMADA



The ATC reduces tool setup time to accommodate various-mix, various-lot production

AFH-ATC tooling

Equipped with an automatic tool changer, operator's of various skill levels can achieve high quality production.

HRB-ATC fully automates tooling setups to accommodate operators of all skill levels and maximize bending productivity. Additionally, the automatic angle sensor (option) provides the target angle from the first workpiece, eliminating test bends.



Press brake with Automatic Tool Changer
and AFH-ATC Tooling

HRB ATC SERIES

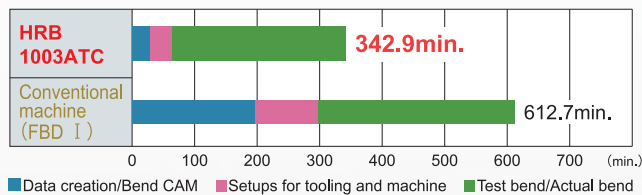
Processing examples with HRB-ATC (Productivity compared to a conventional machine)

Steel Locker

New product lot size: 5
Number of parts: 34

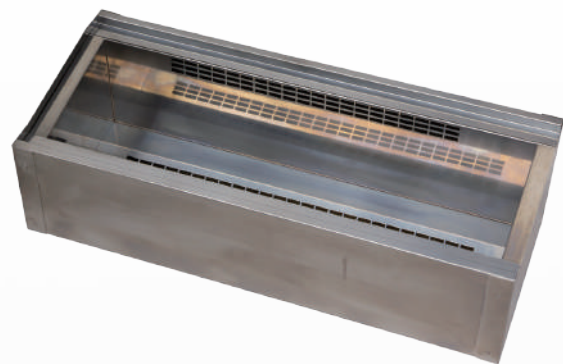


Comparison of Processing Time
44% reduction

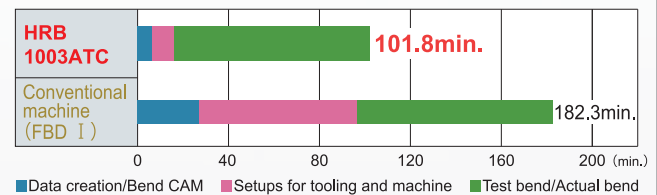


Refrigeration showcase

New lot: 1
Number of parts: 8



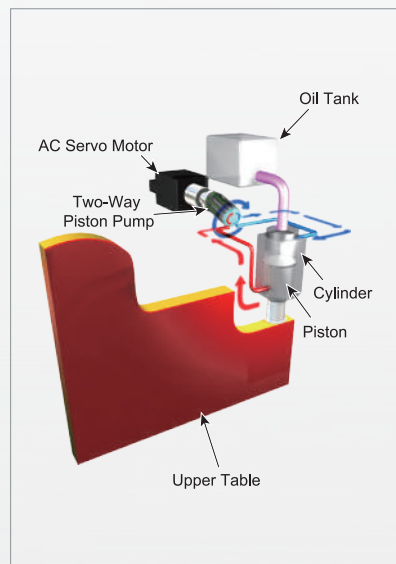
Comparison of Processing Time
44.1% reduction



Features for high quality processing

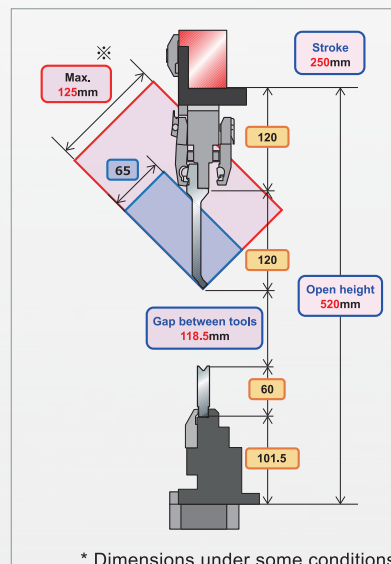
Hybrid drive system

· Achieves high speed and stable operation



Larger open height and stroke

· Expansion of processing range unit : mm



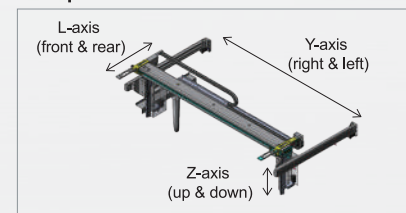
Natural crowning

· Achieves stable longitudinal accuracy



6-axis backgauge

· Setup reduction

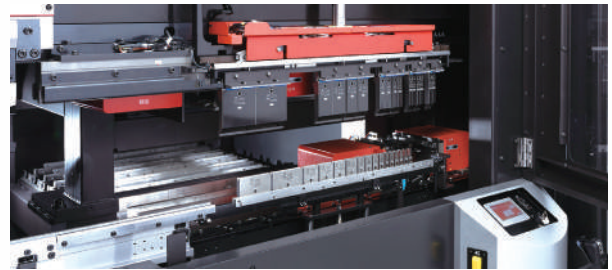


1 Automated tool setup reduces workload, working hours, and improves productivity

Automatic Tool Changer (ATC)

- AFH standard tooling is supported.*
- Tool changes are not affected by the operators skill level.
- Minimizes risk during tool changes.
- Operator focuses on bending parts instead of changing heavy tools.

*AFH-ATC tooling is necessary



Before



Look for tooling



Carry



Install



Fix

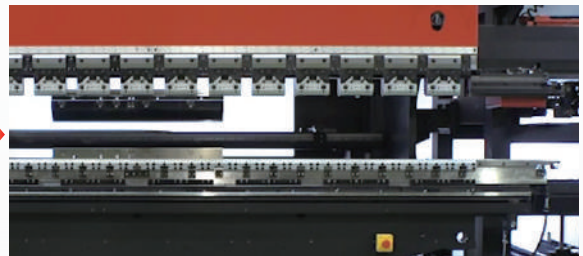
After HRB-ATC automatic tool setu



Tool storage



Accurate placement by robot



Reliable fixing by hydraulic control

2 AMNC 3i Operation

AMNC 3i FULL mode



Mode with all functions including the new function, "2D input"*1

AMNC 3i LITE mode



Simple mode with limited functions such as operation navigation*2

*1 Draw directly on the screen's cross-section while viewing the program. Also, available in LITE mode.

*2 Only offline setup data can be processed for 3D. 3D CAD drawing is not available.

3 Options for immediate use

Many options are available to support inexperienced operators.

Angle sensor Bi-S (Auto 1-axis/2-axis)

Achieve target angle with less test bend

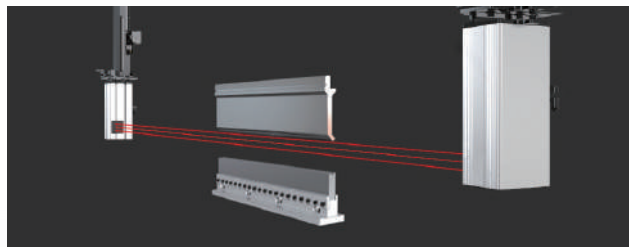
- Contact type angle sensor measures both sides of the part
- High speed & high accuracy
- Two-point measurement is available for long object processing on both auto 1-axis and 2-axis



Laser type safety device AS-01

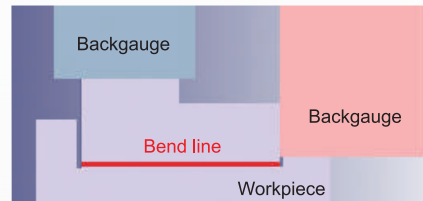
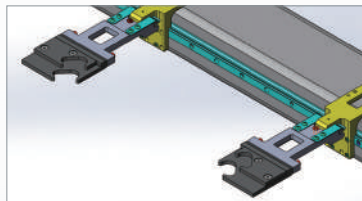
Reliable bending process

- Normal mode
- Box mode
- Slow closing mode



L-shift + Double clamp

Stable backgauge with lateral positioning



*Double-clamp backgauge is 110mm wide.
*Tip color is black.

4 Hazard Prevention Measures

- **Emergency stop button**
Installed on the operation pendant and the edge of the table. Press to stop the machine in an emergency.
- **Side guard**
Prevents hands entering into the side of the machine.
- **Rear guard**
Prevent accidents caused by people entering the work area.
- **Laser type safety device AS-01**



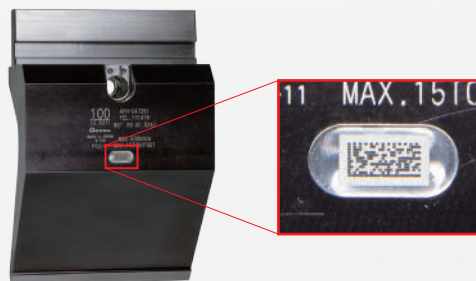
- **Light curtain**
Safety measures for ATC operation.
- **Foot pedals**
Safe operation
3 position foot pedal



5 AFH-ATC Tooling with ID

Cooperation with tooling server (AITS BEND) enables individual management of tooling such as usage status.

* AITS server needs to be arranged separately.

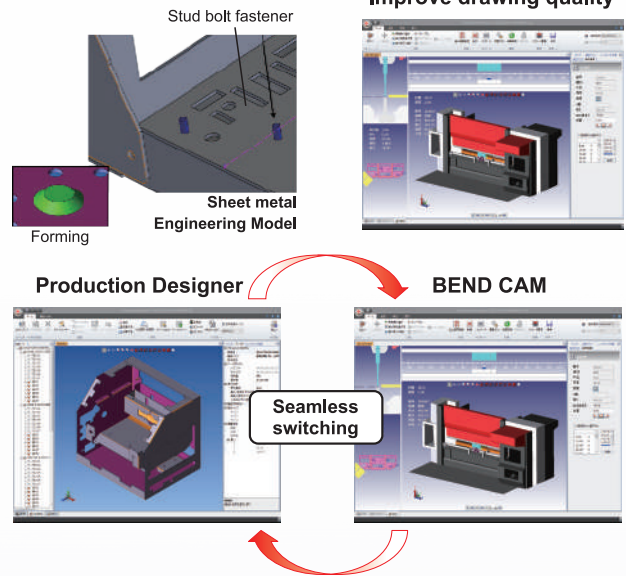


6 Software

VPSS 3i BEND

Highly accurate bending simulation

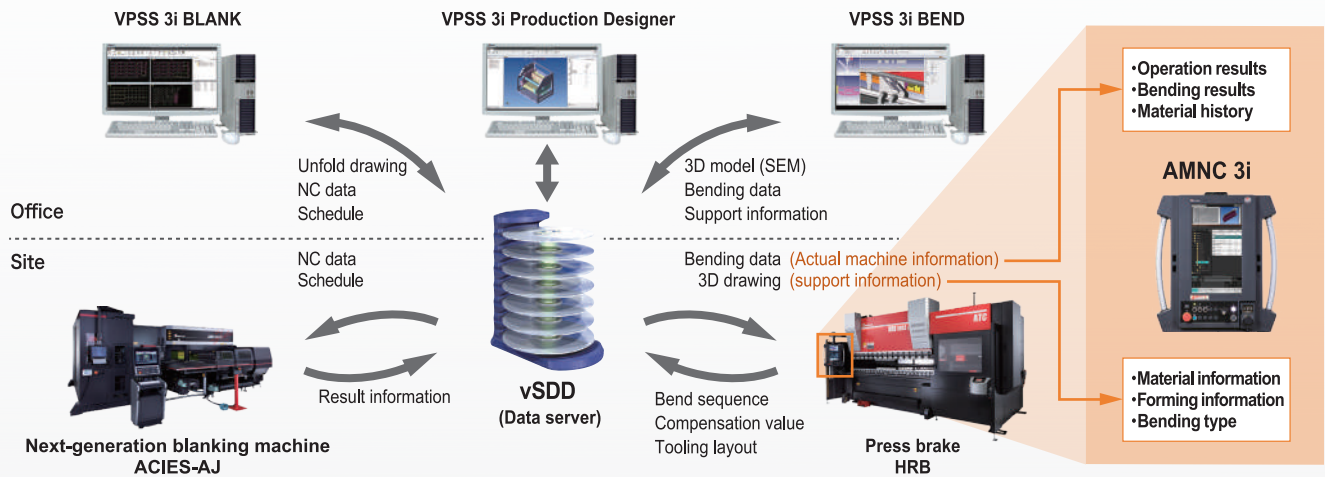
Realistic drawing and processing simulations including non-sheet metal components such as forming, bolts, and fasteners are available. The reliability of the simulation results has been greatly improved.



Cooperation with Production Designer

Production Designer verifies processing feasibility with bending simulation.

Network System



AMADA's IoT: V-factory

Visualize



My V-factory

- Visualized machine operation status



AMNC 3i

Monitor



IoT Support Front

- Machine operation assistance

V-factory: AMADA proposes the new IoT solution to "visualize" customer's factories and achieve high-value-added production.

Number of ATC stockers (Standard specification)

Max. number of stockers enclosed in parentheses are optional.

Punch Stocker		1003ATC	2204ATC
L Stocker Equipped Tool length: 200mm Max. number of tool : (200mm x4 pcs)		7 stockers (8 stockers)	12 stockers (13 stockers)
S Stocker Short division set (Total. 500mm)		3 stockers (6 stockers)	3 stockers (4 stockers)
OP (Optional) Stocker 125mm Ear Tool 4 pcs (different type available)		0 stocker (1 stocker)	0 stocker (1 stocker)
Die Stocker		1003ATC	2204ATC
L Stocker Equipped tool length: 200mm Max. number of tool : (200mm x4pcs)		8 stockers (11 stockers)	14 stockers (20 stockers)
S Stocker Short division set (Total. 500mm) Short division set (For V32/40 Total. 530mm)		5 stockers (7 stockers)	4 stockers (5 stockers)

ATC Tooling (Standard line up)

Series	AFH ATC Punch									ATC
	Standard		Sash	Gooseneck		Burring No.1 type	Straight	Acute	Hemming	For heavy duty
Shape	Cutting edge 9mm	Cutting edge 4mm		Cutting edge 9mm	Cutting edge 6mm					
Cross-section drawing										
Angle	86°			30°			84°			
Tip R	R0.2, R0.6			R0.6			R3.0			
Tool length	200mm set: 200mmx4=800mm Short division set: 15x2, 20x2, 25x2, 40x2, 50x2, 100x2=500mm Ear set: 125 (left), 125 (right)=250mm									

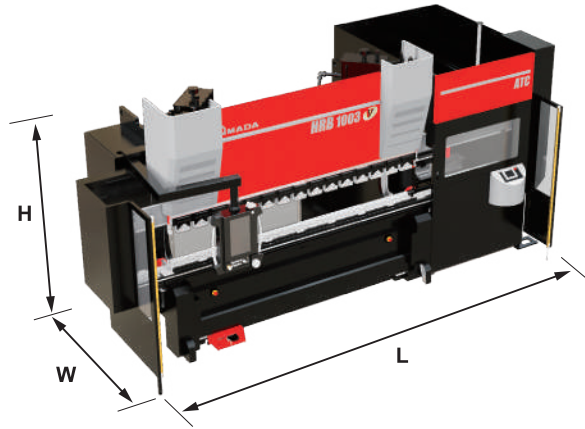
Series	AFH ATC Die A.L.D.											
Cross-section drawing												
Angle	30°			86°							84°	
V width	4, 6, 8, 10, 12			4, 5, 6, 7, 8, 10, 12, 14, 16, 18, 20, 25							32, 40	
Tool length	200mm set: 200mmx4=800mm Short division set: 15x2, 20x2, 25x2, 40x2, 50x2, 100x2=500mm										Short division set: 20x2, 25x2, 30x2, 40x2, 50x2, 100x2=530mm	

■ Dimensions

Unit: mm

HRB-1003ATC
L : 5738 × W : 2432 × H : 2950

HRB-2204ATC
L : 6928 × W : 2662 × H : 3105



*Use air. See floor plan and specification sheets for further details.

■ Machine specifications

Model	HRB-1003ATC	HRB-2204ATC
Registered model name	HRB1003ATC	HRB2204ATC
Total width: L (when pendant is fully open) mm	5738 (6648)	6928 (7846)
Total height: H mm	2950	3105
Depth: W (with L-shift) mm	2432 (3300)	2662 (3530)
Distance between frames mm	2700	3760
Lower table height mm	990	
Bend length mm	3000 (Max.3050 with ear tool)	4000
Open height mm	520	
Stroke length mm	250	
Pressure capacity kN	1000	2200
Motor output kW	2.9×2 (D)	5.5×2 (D)
Number of cylinders pcs	2	
Hydraulic oil capacity L	48	80
Machine weight kg	9500	19000
Approach speed mm/s	150	120
Bending speed mm/s	15	12
Return speed mm/s	150	120
Tilt range (left-right)	D-axis mm	±15
	L-axis mm	±500
Backgauge measurement length mm	700	
Backgauge height range mm	250 (30 – 280)	
Backgauge speed m/min	L-axis: 30, Y-axis: 60, Z-axis: 10	
Primary supply cable mm ²	14(Machine), 3.5 (ATC)	22(Machine), 3.5 (ATC)
Power requirement kVA	9.4(Machine), 3.8 (ATC)	20.1(Machine), 3.8 (ATC)

■ Automatic Tool Changer specifications

Model	HRB-1003ATC	HRB-2204ATC
Tool stocker length mm	Max. 800 per stocker	
Punch Changer	10 stockers (Option: Max. 15)	15 stockers (Option: Max. 18)
Punch Reversal Unit	Automatic Reverse function (option)	
Die Changer	13 stockers (Option: Max.18)	18 stockers (Option: Max.25)
ATC unit position	Right side of the machine	
Tool layout length mm	15 – 3000(Max. 3050 with ear tool)	15 – 4000
Tool length pitch mm	5	
Tool layout range mm	-1525 – +1525	-2075 – +2075

- ⚠ For Your Safe Use**
Be sure to read the operator's manual carefully before use
- Use of this product requires hazard prevention measures to suit your work
For details, see the safety guide on the homepage of AMADA (www.amada.co.jp)

*Specifications, appearance and equipment are subject to change without notice by reason of improvement.
*Please use registered model name for applications related to the administration of the machine or device described in this catalog (installation notification, export, financing, etc.).
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