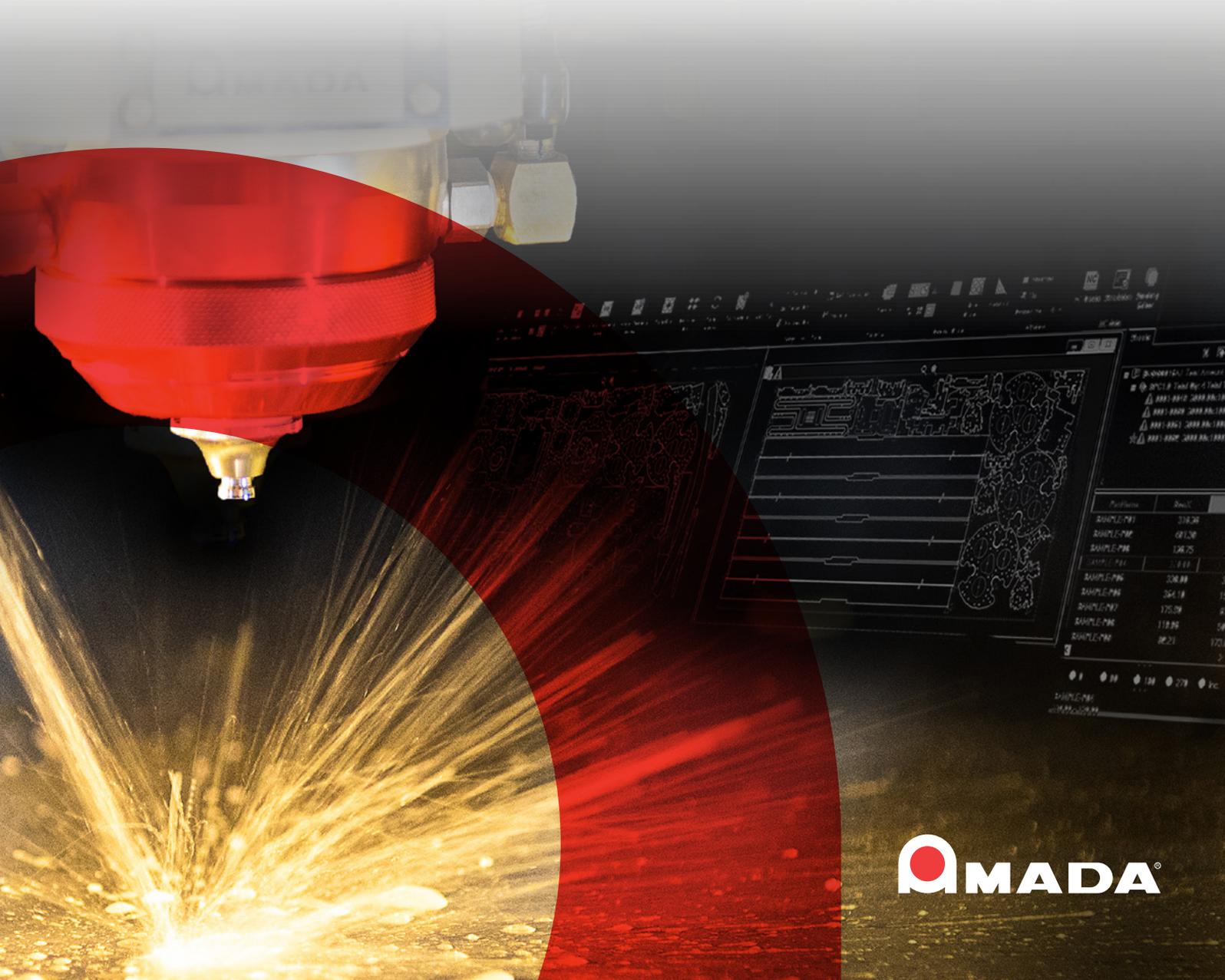




# SOLUTION

## VPSS 4i<sup>e</sup>

SOFTWARE SOLUTION PACKS



## ADVANCED SHEET METAL ENGINEERING SYSTEM

**INTELLIGENT. INTERACTIVE. INTEGRATED. INNOVATIVE.  
EASY. EFFICIENT. ENVIRONMENTAL. EVOLUTION.**

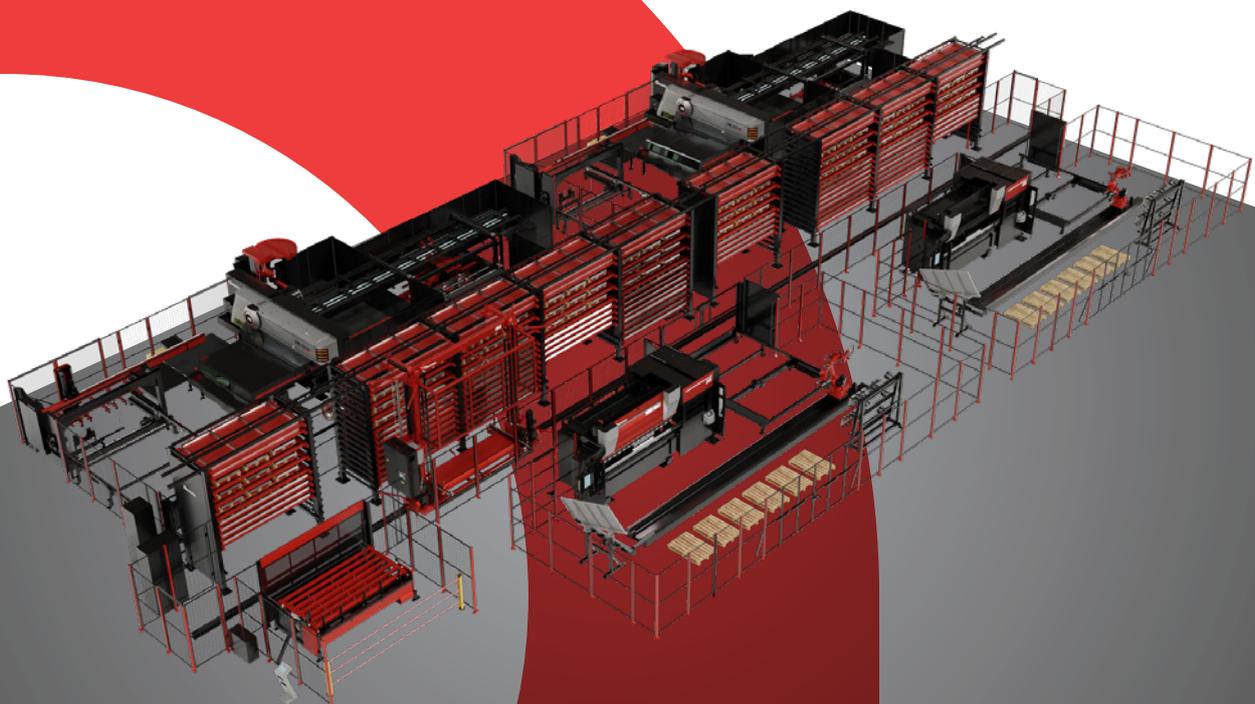
Software is the core of productive sheet metal processing. For decades, we have been working with our customers to offer solutions that can help answer current business demands.

Our previous VPSS 3i product concept of Intelligent, Interactive, and Integrated has been broadened with the addition of Innovative and of Easy, Efficient, Environmental, and Evolution ; our new VPSS 4ie CAD/CAM suite digitizes all manufacturing steps of AMADA machines to maximize production ratio, following on virtual prototyping and simulation system.

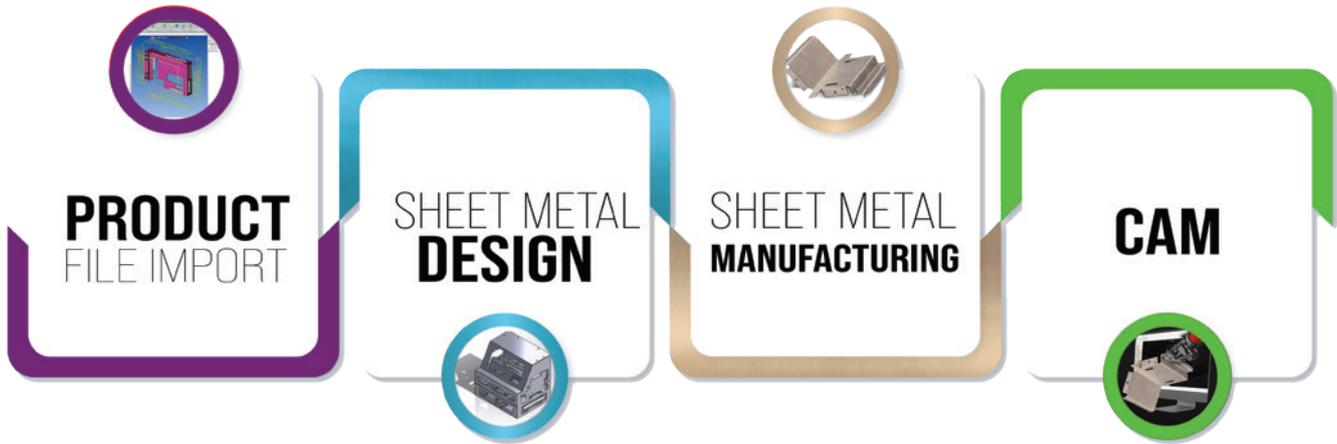
### **DESIGN – WELD – BEND – BLANK**

The key approach is your way of thinking: with VPSS 4ie, you turn the process chain around, starting with the finished product. Whether from native or neutral 2D and 3D CAD data, with our latest software suite, you can easily create sheet metal parts ready for production, without losing sight of the required process steps. Designers can now identify manufacturing flaws in advance, improving processes downstream.

**The advanced approach of VPSS4ie is the key to transforming our customer's factories into Smart Factories!**



# PROGRAMMING FLOW & FUNCTIONS



## Creation of Sheet Metal manufacturing Models

VPSS 4ie is designed to capture 3D and 2D CAD geometry data and generate shared data that can be used for manufacturing sheet metal models (SEMs).

## Assembly Verification

Combines parts in three dimensions to verify that there are no dimensional defects or improper deployment.

## Process instructions

Specifies the machining process, such as punching, lasers, bending, and welding, and then sets the machining instructions.

## Process defect check

Predicts process failures (bending bulges, holes near bending, flange deformation, etc.), and set checks and countermeasures for shapes to avoid machining problems.

## Sheet metal shape editing

Performs hole editing with a faster change, positioning and specific shape editing.

## Machine Simulation

Verifies whether machining is possible considering the set process order and virtually check the result to confirm feasibility.

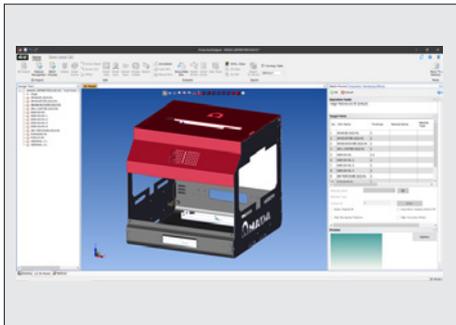
## Schedule Creation

Automatically creates SCHEDULE machining programs for blanking (nesting) and bending (setup of other items) based on production Plan.

## Sheet Report Outputs (3D)

Outputs on-site with work support information such as ASSY 3-D shapes and affirmative information.

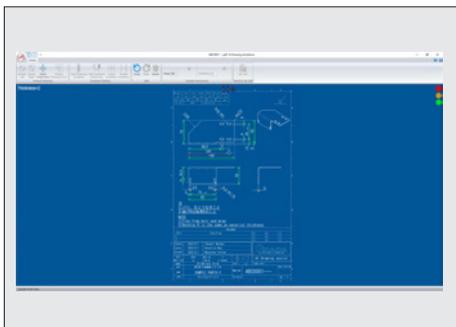
## SOFTWARE MODULES – IMPORT AND CAD SOLUTIONS



### Production Designer

Thanks to the possibility of importing a wide range of 2D / 3D CAD data and advanced defect optimization features, it will be possible to move from design to Production Ready in one click. Production Designer can automatically recognize sheet-metal specific attributes like bend data (V bend, hemming bend etc.), and blanking data (extrusions, tapping, emboss, louver, etc.).

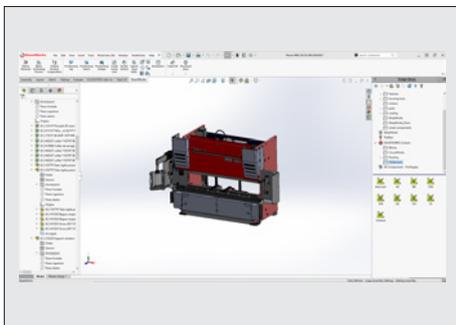
Common platform for all AMADA solution packs.



### VPSS 4ie 2D-CAD

VPSS 4ie 2D-CAD includes specific sheet-metal drawing & unfolding functions. Thanks to the AI, you can easily move from paper to digital: unfold drawings and 3D data can be created starting from a PDF or scanned drawing.

Available with all VPSS 4ie solution packs.

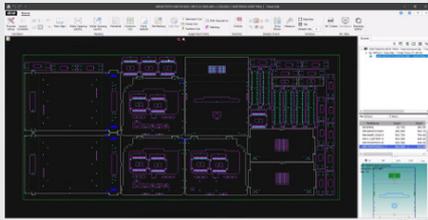


### SheetWorks

SheetWorks combines AMADA's sheet-metal and bending expertise with the SolidWorks environment to enhance the sheet-metal modelling capabilities. With the help of the «BatchUnfold» feature, it can generate unfold drawings automatically and effectively, including all the relevant CAD/CAM characteristics, based on the 3D assembly. These can then be saved to the AMADA Digital Database.

Available with VPSS 4ie TUBE solution packs or standalone.

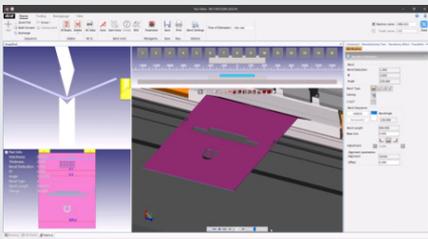
## SOFTWARE MODULES – CAM SOLUTIONS



### VPSS 4ie BLANK

VPSS 4ie BLANK is the evolution of CAM for AMADA blanking machines: is a perfect mix of advanced algorithms for automatic processing (nesting creation, tool assignment and process sequence) and a smart manual environment for a quick manual editing.

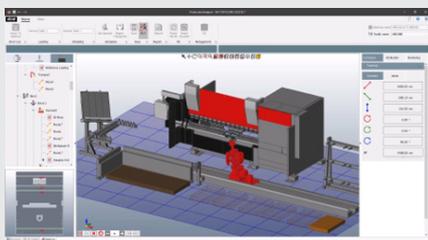
Available in VPSS 4ie BLANK / TUBE solution pack.



### VPSS 4ie BEND

VPSS 4ie BEND is our fully automated and optimized software for bending machines. Thanks to AI Bend feature, it's possible to calculate bending sequence and tooling by taking advantage of similar product already saved. The software also boasts an advanced tooling engine that calculates the most efficient tool layout to reduce press brake tool setup time during daily production.

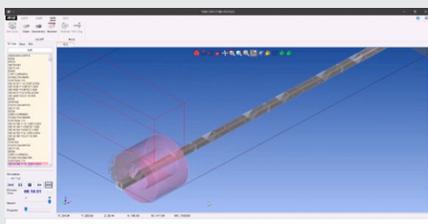
Available in VPSS 4ie BEND solution pack.



### VPSS 4ie ARBEND

VPSS 4ie ARBEND: enables quick and intuitive robot programming. The «Programming Assist» feature automatically calculates the robot movements, bending sequences, tooling etc. (available only on specific cell models). The robot feasibility check time is shorter than with conventional CAMs, and the «teaching» phase is reduced thanks to the «programming office».

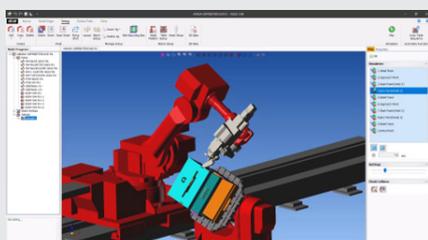
Available in VPSS 4ie ROBOT solution pack.



### VPSS 4ie TUBE

VPSS 4ie TUBE is designed to run our rotary index machine series, with the highest efficiency. With few clicks it will be possible to create NC code for tube nesting and check 3D simulation to prevent any machine defects. Combined with SheetWorks , for a CAD-to-CAM smart link, and pre-defined pattern libraries.

Available in VPSS 4ie TUBE solution pack.



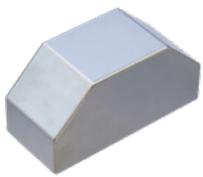
### VPSS 4ie WELD

VPSS 4ie WELD simulates the robot path based on data stored inside the AMADA Digital Database (3D model, welding attribute...) to enable offline programming and consequently enhancing the machine production ratio.

Available in VPSS 4ie WELD solution pack.

## SOFTWARE SOLUTION PACK OVERVIEW

 <h3>VPSS 4ie Blank Solution Pack</h3> <p>The Blank Solution Pack comprises all the AMADA blanking CAM solutions in order to run your AMADA laser, combi and punching machines at the highest speed and optimum level.</p> <hr/> <p><b>Pack includes</b></p> <ul style="list-style-type: none"> <li>● Production Designer</li> <li>● VPSS 4ie 2D-CAD</li> <li>● VPSS 4ie BLANK</li> </ul> 	 <h3>VPSS 4ie Bend Solution Pack</h3> <p>Press brake productivity will be drastically improved through this complete suite of software which takes care of sheet-metal part creation and off-line bending program generation.</p> <hr/> <p><b>Pack includes</b></p> <ul style="list-style-type: none"> <li>● Production Designer</li> <li>● VPSS 4ie 2D-CAD</li> <li>● VPSS 4ie BEND</li> </ul> 	 <h3>VPSS 4ie Robot Solution Pack</h3> <p>Our latest solution to program your AMADA's bending robot: with the Bending Robot Solution Pack you have all you need to run your production at the highest level.</p> <hr/> <p><b>Pack includes</b></p> <ul style="list-style-type: none"> <li>● Production Designer</li> <li>● VPSS 4ie 2D-CAD</li> <li>● VPSS 4ie ARBEND</li> </ul> 
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 <h3>VPSS 4ie Tube Solution Pack</h3> <p>The Tube Solution Pack is everything you need to run your AMADA tube laser machine with the highest efficiency.</p> <hr/> <p><b>Pack includes</b></p> <ul style="list-style-type: none"> <li>● Production Designer</li> <li>● VPSS 4ie 2D-CAD</li> <li>● VPSS 4ie BLANK</li> <li>● SheetWorks</li> <li>● VPSS 4ie TUBE</li> </ul> 	 <h3>VPSS 4ie Weld Solution Pack</h3> <p>AMADA welding machines can be easily driven using the software included inside the Weld Solution Pack for the off-line welding programming.</p> <hr/> <p><b>Pack includes</b></p> <ul style="list-style-type: none"> <li>● Production Designer</li> <li>● VPSS 4ie 2D-CAD</li> <li>● VPSS 4ie WELD</li> </ul> 
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# PRODUCT OVERVIEW

## PROCESS STEPS

This table shows you which is the software you need for each process step.

		BLANK SOLUTION PACK	TUBE SOLUTION PACK	BEND SOLUTION PACK	ROBOT SOLUTION PACK	WELD SOLUTION PACK	LIVLOTS*	V-factory*	AMNC 4ie FMS/ V-factory IS*
<b>CUSTOMER INQUIRY</b>	Customer order entering						●		
<b>PRODUCTION PLANNING AND PROGRAMMING</b>	Production planning						●		
	Job schedule creation	●	●	●	●	●	●		
	Work order creation						●		
	Import/design part	●	●	●	●	●			
	Part programming	●	●	●	●	●			
<b>NETWORKED PRODUCTION</b> o Blanking o Bending o Welding	Assign job to machine	●	●	●	●	●	●		
	Monitor machine data						●	●	
	Measure production efficiency						●	●	
	Visualize machine status						●	●	
	Control machines during production						●	●	
	Assembly management	●	●	●	●	●	●		
	Notifications in the event of a malfunction						●	●	
	Report job as complete						●		
	ERP Interface						●		
	Analytics: tools, material, performance, programs						●	●	
<b>AUTOMATION</b>	Control automatic store						●		●
	Manage manual store						●		●
<b>INTRALOGISTICS AND SETUP</b>	Orders prioritization and tracking						●		

\*For further information on these products please refer to the specific brochure.

# PROCESS OVERVIEW

## DIGITAL MANUFACTURING AND VPSS 4ie SOFTWARE EVOLUTION



With VPSS 4ie, you can seamlessly transmit and receive machining program data via a network while managing machine operation.

VPSS 4ie is set to become the central component of the machine network system. By integrating the strengths of each system, it will enhance operational efficiency.

## LIVLOTS - LIVE VARIABLE LOT PRODUCTION SYSTEM

Connecting people, products and solutions in a digitalised way

- Quote
- Orders
- Production planning
- Production analytics
- Production control
- Real time monitoring
- Logistics
- Inventory
- Manual production phases

### LIVLOTS CONNECTED FACTORY

The LIVLOTS concept gives you the possibility to digitalise the whole manufacturing process, starting from the work-order management to the shop floor, passing through the programming process.

#### The key to digital transformation

Particularly noteworthy is the deep integration into innovative machine technologies, the VPSS 4ie CAD CAM software solution for virtual prototype manufacturing, complemented by predictive support from technical services, which reduces downtime and increases machine availability.

**As a result:**

- Production processes more efficient and reliable.
- All information digitised and shared between all the involved people and workspaces.
- Customised solution that grows alongside your business.

## V-factory - IoT PRODUCT AND SUPPORT

Keeping an eye on production - simple, clear and accessible

- Monitoring
- Manufacturing Design
- Factory Control
- IoT Servicing
- IoT Consulting

### IoT PRODUCT

Various types of information can be connected within the customer facility to help create a smart factory.

**As a result:**

- Improved operation efficiency
- Faster information sharing, visible through the cloud
- Easier cost management

### IoT SUPPORT

It connects customers and AMADA through AMADA services.

**As a result:**

- Maximum machine uptime
- Minimum recovery time
- Proposals for better operations based on real data.

**AMADA UK LTD.**  
Spennells Valley Road,  
Kidderminster,  
Worcestershire DY10 1XS  
United Kingdom  
Tel: +44 (0)1562 749500  
Fax: +44 (0)1562 749510  
www.amada.co.uk

**AMADA SA**  
Paris Nord II  
96, avenue de la Pyramide  
93290 Tremblay en France  
France  
Tél : +33 (0)149903000  
Fax : +33 (0)149903199  
www.amada.fr

**AMADA GmbH**  
Amada Allee 1  
42781 Haan  
Germany  
Tel: +49 (0)2104 2126-0  
Fax: +49 (0)2104 2126-999  
www.amada.de

**AMADA ITALIA S.r.l.**  
Via Amada I., 1/3  
29010 Pontenure  
(Piacenza)  
Italia  
Tel: +39 (0)523-872111  
Fax: +39 (0)523-872101  
www.amada.it

