# CASE STUDIES ARAYMOND TECHNOLOGIES CLIPS / QUICK CONNECTORS / BONDING



### THE BIG THREE

The ARaymond™ brand is recognized for its tool-free clipping solutions, Quick Connectors and innovative bonding solutions for the manufacturing industries. Whether they are from our standard catalog or custom-developed, all of our solutions deliver ease of use, fast and reliable assembly, and robust performance—to add value to machines, equipment, and any manufactured or assembled product while reducing costs.

On this whitepaper you will find three real case studies; one for each technology. In each situation we are proposing a solution which brings savings and innovation to improve the traditional assembly that the customer was using.

# **CASE STUDIES**

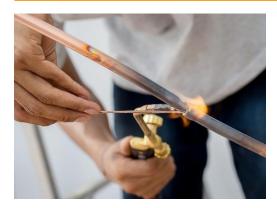
Connection of the heat pump for a thermodynamic boiler

Attaching a metal panel to an internal frame

Aesthetic assembly of a front panel



# CONNECTION OF THE HEAT PUMP FOR A



#### **Traditional Solution**

The most common way to assemble a heat pump with a thermodynamic boiler is usually a connection between aluminum and copper pipes. The traditional solutions usually employed to perform this connection are brazing and metal crimping. But these operations are time-consuming, expensive, complicated, and do not allow quality repeatability.



#### **ARaymond Solution**

The solution proposed by ARaymond is based on a quick and safe connection by simply pushing it on both tubes which are previously easily prepared by cold forming. This implementation reduces the time to connect the heat pump, reduce non-quality cost, and eliminate corrosion. Moreover, this connection allows disconnection, only if necessary, for easy maintenance.

>More information about this technology

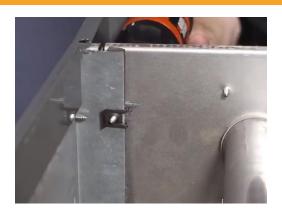
## Clip Systems

# ATTACHING A METAL PANEL TO AN INTERNAL



#### **Traditional Solution**

The traditional solution to assemble a metal sheet to the internal frame of an appliance is threading thin metal panels to attach them using a screw. Due to the complexity of this threading operation, there is a high probability of stripping the metal sheet and replacing the entire panel in consequence, which would carry on more manufacturing and material costs.



#### **ARaymond Solution**

ARaymond panel edge nuts are easy to assemble with no special tools and the retaining tab keeps them firmly in position for pre-assembling. They act as covers avoiding the weak threads currently made in the thin panels. Also, the pre-assembly feature allows people focusing on their mastered operations, optimizing the assembly process and assuring final goods quality.



# AESTHETIC ASSEMBLY OF A FRONT PANEL



#### **Traditional Solution**

This business case features the manufacturing of highquality radiators with special attention to the aesthetics of the product. On this kind of application, manufacturers weld bolts to the front panel to attach it to the frame, but this operation leaves marks on the panel that may ruin the appearance of the final product. On top of that, this is an expensive operation due to high assembly-time and quality costs.



#### **ARaymond Solution**

ARaymond uses its patented bonding solutions to design the assembly of the front panel of the radiator using adhesive-bonded bolts. This customized solution is completely hidden to provide a perfect finish. The solution includes the fast-curing adhesive, bonding processes, flows, equipment, training, maintenance, and technical support as long as the bonding solution is running on the customer's production lines.

### **ABOUT ARAYMOND**

With more than 150 years of experience in product innovation and state-of-the-art manufacturing practices, ARaymond has become one of the world's foremost assembly solution providers.

ARaymond Industrial is an international partner for innovative assembly solutions dedicated to industrial markets. We partner with customers to develop products that meet their market segments' unique needs, simplifying assembly processes, improving the quality of the final product, and reducing the total cost of ownership across the supply chain.

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