

sapa:

bringing **aluminum** to **life**

Sapa, Inc. **TDA**

The intricacies and efficiencies of scale

At Sapa, Inc. TDA we extrude and fabricate highly detailed aluminum components of superior quality and engineering. We craft pieces that weigh as little as .007 of a pound per foot. We create wall thicknesses as thin as .015 inches. We work with tolerances as close as .001 of an inch. We apply this accuracy to projects of any scale.

We're part of Sapa Group, one of the world's leading suppliers of extrusion and value-added manufacturing of aluminum profiles. We succeed because we focus on developing new technologies and processes that drive excellence in product and service. For you that means creative and insightful solutions from a committed aluminum fabricator.

We think accuracy, performance and innovation are things of beauty.

For Sapa, Inc. TDA and for our customers, opportunity is based on quality, precision, and the ability to innovate. Our partners are leaders in industries that demand highly accurate and consistent quality: aerospace, electronics, transportation, medicine, defense systems, and some of the leading consumer products manufacturers. Projects that come through our door are some of the most advanced and demanding production concepts in the world of extrusion technology.

"Boat tower" may be a simple concept to most of the world, but to Sapa, Inc. TDA it is an open door for us to investigate and to innovate. What is the essence of its function? What is its environment of use? How can we apply new materials and fabrication technology to add



strength, reduce weight, enhance performance and bring value to the customer? How can we work with our customers to achieve the ultimate combination of science and art in aluminum? Sapa, Inc. TDA is in the business of building answers to those questions for any customer in any country.

We do it with a complete mix of extrusion and fabrication services, using materials of the highest quality and workability:

Extrusion

Experimental Alloy

Assembly

CNC machining

Fabricating

Anodizing

Silk-screening

Painting

Bending

Welding

Science shapes innovation

It's our job to bring you the most advanced thinking and R & D resources in the world of aluminum extrusion and fabrication. Through group R & D centers like Sapa Technology, the Sapa Cooling Competence Center and Technical Services, we are constantly developing advanced equipment for simulation, measurement and investigations into new materials technology. The people behind those centers are among the world's finest metallurgists, chemists, physicists, designers, mechanical engineers and production technicians. All are specialists in aluminum. Our reputation makes us a valued partner by key universities, colleges and research institutes around the world.

Service shapes relationships

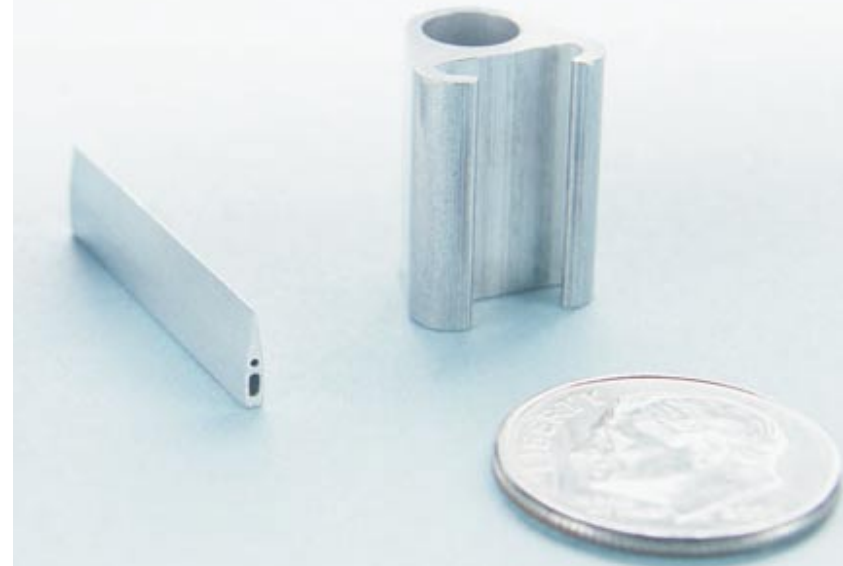
Sapa, Inc. TDA knows that technical expertise is a strong part of the story. Our focus is equally on the customer's vision, on performance needs, on integration opportunities, on cost and delivery goals, on engineering innovations, and on the implications of the customer's brand. For Sapa, Inc. TDA, success is personal. Our customers appreciate that.

Commitment shapes success

One major supplier of aerospace and electronic equipment to the armed forces searched for more than a year for the right specialty extruder. The project required highly precise, tight tolerance aluminum extruded shapes and thin wall tubing, as well as small press hard alloy shapes. Our aggressive production, service and

quality commitments earned Sapa, Inc. TDA the job and the top award at the International Aluminum Extrusion Design Competition in Washington, DC.

Our customers often say, "I don't know if this can be done, but here's what we'd like to create." That is our passion – bringing ambitious ideas and designs to life in aluminum.



Specifications

Tolerances: As close as +/- .001" based on shape

Weight: As low as .007 lb. per foot

Wall thickness: As thin as .015 inch

Extrusion Press: 550 ton 4 1/2"

Circle Size Capabilities and Aluminum Alloys Available:

2.5"/3"/3.5"/4.5" Circle Sizes: 6000, 2000, 7000

6"/7"/8"/9"/10" Circle Sizes: 6000

Available Alloys:

6000 Series Soft

2000 & 7000 Series Hard

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Heat Treat:

Thermal – 24 ft. Oven Capacity

Solution – 12 ft. Length Capacity

Annealing – 12 ft. Length Capacity

Quality Assurance & Inspection:

In accordance with ISO 9001 : 2000

Certification:

Meet or exceed all applicable military and federal specs

Statistical Process Control:

SPC Program measures control of specific extrusion and part processes

Sapa works in close cooperation with its customers to create innovative value-added solutions based on aluminum profiles and strip.

Sapa is an international industrial corporation with a turnover of approximately \$2.1 billion in 2004. Sapa employs approximately 8,000 people in companies throughout Europe, the United States and China. Major customer segments include construction, shipping and engineering industries.

sapa:

Shaping the future