



More than 65 years producing
precision aluminum die castings

Rangers Die Casting Company

RANGERS Results

Quarterly News

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Bringing the Work Home Now



For decades, the logic of the global economy was to outsource manufacturing from the U.S. market to China, India and other low labor cost economies. Recent articles in trade and business publications point to a reversal of this trend where production is “re-shoring” or returning to American shores. Here’s a quick look at why re-shoring makes sense today.

Labor Savings Not Likely

The savings on labor was thought to be tremendous compared to American labor costs. Turns out most American companies outsourcing production were wrong. Any labor cost savings were lost in other expenses.

Here’s the problem with labor costs: Some companies went to China, India and other off shore locations to gain a foothold to sell their products and services in those economies and to be in a better position to serve the global marketplace. Companies with these goals in mind were in a better position to succeed. But those simply looking to take advantage of low-cost labor markets so they could sell for less in the US generally lost.

Often overlooked in the outsourcing era by companies seeking lower cost production were the hidden costs of overseas manufacturing. Long lead times, miscommunication, legal issues, die failure, shipping problems, and payment for products sight unseen have always made offshore manufacturing an iffy proposition at best. Today, when you factor in the reality of rising costs for labor, transportation, fuel, and power, the savings, if any, rarely justify the investment.

What Went Wrong?

One of the reasons companies took to offshoring in the first place back in the middle of the last century was to take advantage of the product life cycle. The idea was a new product in those days needed to be manufactured near the source of design and product development. Distance made it difficult to make design improvements and take advantage of more efficient ways to manufacture. But as the new product matured, its production became more of a cookie-cutter operation requiring a minimum of engineering and designer involvement. With simplified manufacturing, it became easier to reduce production costs by moving manufacturing to low cost overseas markets. Unfortunately, companies didn’t always make an accurate calculation of the hidden costs of offshoring.

Today, lean manufacturing, green initiatives, high technology production, and continuous improvement programs necessitate greater engineering involvement and closer management of production throughout the product life cycle. These trends make it more efficient to manage production close to the source of design and closer to the source of customers.

USA – The Low Cost Production Country

In recent years, labor costs have started to go through the roof in places like China and India. As new product designs become ready to go into production, companies are very concerned about having their innovative technology ripped off in markets that

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Keys to Successful Die Design for You

At Rangers Die Casting, we design your dies for the long term so you can rely on high quality results over time. Here are five keys of die design that we incorporate into every die we produce. These keys are based on research conducted by the North American Die Casting Association (NADCA) as well as our own experience serving the aluminum die casting market for more than 65 years.

1. Take advantage of better metal composition: Heat treating and metal composition combine for a harder, longer lasting die. Rangers Die Casting uses the highest grade metals in producing its dies.



2. Properly locate cooling lines during production: Cracking can occur at high temperature operation. Studies show that the optimum placement of the cooling line is 1/2 inch from the cavity surface, which can extend die life by as much as 30%. Rangers Die Casting will design your die for optimum long-term performance.

3. Control the cooling line: Internal cooling lines can shock the die and increase thermal fatigue. Controlling flow rates and temperature can extend

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Bringing the Work Home Now

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do not respect intellectual property rights. Meanwhile manufacturing in the US is becoming more technology-driven with less reliance on labor. This translates into extremely high productivity rates from American production plants.

The U.S. economy has a virtual unlimited supply of natural gas to keep power costs low. Shipping costs are minimal when shipping from a U.S. plant to a U.S. customer.

All these factors add up to lower cost of manufacturing in the US. Re-shoring is the natural result of these trends in the global economy.

As a U.S.-based supplier, Rangers Die Casting supports re-shoring efforts for American companies. If you are currently manufacturing overseas, we can help you calculate the potential cost savings and other benefits of bringing the work home now.



Keys to Successful Die Design for You

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die life. Rangers Die Casting includes cooling line controls on all production cells.

4. Stress temper tools at 10,000 to 20,000 shots to extend die life.

Our dies meet your production requirements while assuring you of cost-effective operation over the long term.

Finally, we are able to create models to verify that aluminum die casting design will meet your exact product specification.



TOP 10

10 Things You Should Know About Rangers Die Casting

10. Rangers Die Casting has launched an all-out new Green Initiatives program with far reaching benefits for all OEM customers.
9. We specialize in aluminum die casting
8. We handle production runs from 100 to 1,000,000 pieces
7. We were the first west coast die caster to deploy real time x-ray technology for quality assurance.
6. We have more than 65 years of experience in aluminum die casting
5. We serve Automotive, Aerospace, Communications, Computer, HVAC, Sporting Goods and other major market segments.
4. We collaborate with our customers for better die design and more efficient production
3. We are your one-stop solution for aluminum die casting design assistance, die design, precision aluminum alloy castings, machining, finishing and assembly.
2. We offer the fastest turnaround in the industry so you can depend on receiving your pieces when you need them.
1. We operate 14 aluminum die casting cells with gas and electric furnaces so we have the capacity to handle all your needs.

Where Does Our Aluminum Come From?

And What's In It?

We source all our aluminum from a supply chain that uses a combination of recycled scrap metal and pure aluminum alloyed with additives. These additives may include silicon, beryllium, phosphorus, strontium, chromium, manganese or titanium depending on the specific requirements of your product. Aluminum is the one metal that is 100 percent recyclable so you may think of it as the "green" metal. It's also one of the most versatile of metals.



No "Conflict Minerals"

The Dodd-Frank Wall Street Reform and Consumer Protection Act of 2010 requires that companies report on the chain of custody for certain metals. The act covers columbite-tantalite (coltan), cassiterite, gold, and wolframite. These minerals are sourced for the production of tantalum, tin and tungsten. The act requires that we report if the metals extracted from these minerals are necessary to the functionality or production of any products we manufacture. If so, we are to disclose if any of the minerals are "Conflict Minerals Originating in the Democratic Republic of the Congo (DRC)."

The aluminum alloys we use do not include these "Conflict Minerals" or the metals derived from them. These metals are not necessary to the functionality or production of our products. We do not source minerals or metals from the DRC or surrounding nations in Africa.



DESIGN 2-PART SHOW

PASADENA, CALIFORNIA
OCTOBER 9-10, 2013



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