How 3D Printer Purchasers Earn Research and Development Tax Credits

by Charles Goulding | Mar 22, 2017 | 3D Printers, 3D Printing, Business |

When end users purchase 3D printers it is normally a strong indicator of Research & Development (R&D) tax credit eligibility. Product designers and manufacturers typically purchase 3D printers to either create a new or improved product or self manufacture a previously supplied component by a third party. Both the creation of these new and improved products and the conversion of these component purchases are typical R&D tax credit eligible activities.

The Research & Development Tax Credit

Enacted in 1981, the federal Research and Development (R&D) Tax Credit allows a credit of up to 13 percent of eligible spending for new and improved products and processes. Qualified research must meet the following four criteria:



- New or improved products, processes, or software
- Technological in nature
- Elimination of uncertainty
- Process of experimentation

Eligible costs include employee wages, cost of supplies, cost of testing, contract research expenses, and costs associated with developing a patent. On December 18, 2015 President Obama signed the bill making the R&D Tax Credit permanent. Beginning in 2016, the R&D credit can be used to offset Alternative Minimum Tax and startup businesses can utilize the credit against $250,000 per year in payroll taxes.

Creating New and Improved Products

Creating new and improved products normally requires numerous 3D printer design prototype iterations. Both the time spent on wages and materials consumption during the creation of these prototypes should be eligible for R&D tax credits.

3D printers enable product designers to actually become product manufacturers. More and more materials, including a variety of plastics, metals and food ingredients, are now 3D printer compatible. This expanded compatibility greatly increases the range of product designs. 3D printers are particularly important for precise, complex product designs and shapes ranging from aircraft parts to human body parts and organs. The popularity of 3D printers for new and improved products is evident from reviewing the large volume of offerings on crowdfunding sites such as Kickstarter.

New and improved products typically require manufacturing process improvements including new machine programs, and new packaging designs. This activity can also be R&D tax credit eligible. Moreover, new and improved products require testing and quality control processes. This activity is R&D tax credit eligible well.

Taking Component and Part Manufacturing In-House with 3D Printing

Historically, many manufacturers and product assemblers have had to depend on critical component and part manufactures for their own viability. Relying on suppliers is particularly risky when there are few suppliers, the supplier parts are costly or the supplier is overseas. For a while it was common practice for many manufacturers to outsource component manufacturing to overseas suppliers. Many of the overseas outsourcing initiatives have been problematic due to quality issues, delivery issues and counterfeiting.

Automation and lean initiatives are freeing up U.S. manufacturing plant space providing room to re-shore component and part manufacturing using 3D printing for both design and manufacturing. Politically, it is becoming more important for U.S. manufacturers to manufacture in the U.S.

3D printing design and manufacturing is ideal for components and parts that are obsolete or out of stock. Often, profit margins on the retail sale of parts and components are substantially higher than the underlying complete product. 3D printing enables the manufacturer to capture the high margin parts' annuity revenue streams.

Conclusion

The purchase of a 3D printer is a strong indicator of R &D tax credit eligible activity. 3D printer sellers and end user should consider this important tax incentive in the course of their 3D printer decision making.

R&D Tax Savers

Charles R. Goulding and Michael R. Wilshere of R&D Tax Savers discuss research and development tax credits which are available for 3D printer purchasers.