

NAMCOR LASER

186,000 miles per second

Fibre Laser Processing for HVAC Duct Fabrication

Over the past 30+ years, sheet metal fabricators and contractors have been enjoying the highly productive advantages of CNC plasma cutting. With these enhancements, fitting fabrication has increased a shops ability to generate work out the door, tenfold; making it a recognizably essential piece of equipment to sheet metal shops everywhere! (Most companies operate one or more plasma cutters to satisfy the demand of their sheet metal production). Over the years, progression has remained consistent; however, with more competitors entering the marketplace, prices have decreased significantly; and in turn, created a wide-range in quality of machines; scaling from low-grade to highly reliable and efficient. If you are considering a new plasma cutting system for your HVAC sheet metal fabrication, there is now a new and exciting opportunity to move beyond plasma! **NAMCOR LASER** is pleased to represent and cultivate the next generation of fitting fabrication for sheet metal shops, with the introduction of Fibre Lasers to its list of innovative fabrication machinery! Even though Fibre Lasers have been around for many years, its swift evolution for metal processing has provided sheet metal shops new opportunities to further advance the way in which they manufacture. Fibre Lasers have the ability to mark, cut, engrave, machine, and transport information from computer to computer. The market is inexhaustible!

What does this mean for sheet metal shops that now employ plasma as their main cutting tool for parts and fittings?...

For decades, plasma has been the preferred choice for fitting fabrication, but as we all know, plasma burnt edges cause many issues for the downstream equipment. Wearing of guides, rollers and other surfaces have created a negative effect on other equipment. Fibre Lasers have a cut quality that is far greater than plasma! It does not affect downstream equipment, and the speed and accuracy exceeds that of plasma as well. Fibre Lasers are significantly more efficient than plasma, with far less smoke generated, and has reduced consumables to approximately 10% or less of the plasma torch parts. Plasma cutting is a dirty process; leaving smoke and dust everywhere and requiring a large exhaust system to alleviate as much as it can. The Fibre Laser metal removal is about the thickness of a strand of hair, creating far less smoke and dust being exhausted into the environment/filter system. When cutting galvanized steel with Fibre Laser, clean dry compressed air is a suitable gas (just like plasma), so an increase for specialty gasses is not necessary. To cut specialty metal/thicker metal, Nitrogen or Oxygen may best serve your needs. (Most laser table manufactures have multiple gas inlets for easy changeover from one gas to another).

Fibre Laser tables are available in a variety of different styles; from open table (like plasma), to completely enclosed, with exchange table, for easy loading and unloading of sheets. Some manufacturers have their laser tables in line with a coil-feed system. Most importantly, laser safety is a priority; but with the enclosures or shroud covers at the laser exit point, it addresses these concerns for protection. Fibre Lasers are now being introduced into the HVAC fabrication shops by new companies and also companies who have been in the marketplace with plasma technology. Prices for Fibre Lasers have reduced over the years to the point that many HVAC shops can now consider it as an affordable alternative to plasma. Combined with the cutting software you presently own, or new software supplied by several companies, you can have greater cutting accuracy, speed, less generated smoke and far less downstream damage to other valuable equipment. You will find that Fibre Laser machines will be the future for cutting HVAC parts and fittings. ...In fact, it is here now!

What you need to know before purchasing a Fibre Laser...

When you search for a Fibre Laser cutting table, it is important that you look for these listed features to assure you will have a machine that performs well into the future, avoiding major issues:

Base frame of a 5' x 10' table should be at least 4 tons!

The acceleration and deceleration of the cutting head requires the frame to be very stable. If it is a light steel frame, flexing will take place over time and decrease accuracy. Frame should be heavy steel construction, heat treated, stress relieved and then machined for accuracy and stability. Cast frames are not as rigid as heavy welded construction and can cause the table to become unstable over time. This is true of more than just laser tables. *"Welded steel bodies of machines are more rigid than cast iron bodies"* - Podstawy Konstrukcji Maszyn (Fundamentals of Machine Design) Volume 2, Collective Work, Wydawnictwa Naukowo-Techniczne (Scientific and Technical Publishing), 1999.

Gantry material should be light weight but very stable!

Many plasma table manufacturers employ aluminum in the manufacturing of their CNC plasma tables. This is not acceptable for the structural manufacturing of Fibre Laser tables. Gantry should be a light-weight steel-cross beam so speed and acceleration/deceleration can be maximized. Manganese steel is light weight like aluminum, but has greater stability when the cutting head momentum changes at high speed. This is a must for the base frame of the machine! *It is very important to consider these items when looking for a long-term use Fibre Laser!* Some companies have Fibre Laser products aimed at the HVAC industry that use a steel tube frame as its base, with weight less than 2 tons for a 5' x 10' table. *Consumers should be aware that even though this may be acceptable when first put into service, it will lose stability over a shorter period of time!*

Why NAMCOR LASER?...

NAMCOR LASER has partnered with a high-quality laser table manufacturing company from China. These laser tables are built to exact specifications and have far higher standards than most other laser tables on the market. These tables are 4.5 tones, with a gantry cross-beam made from manganese steel. **NAMCOR LASER's** table base frame requires 51 days to complete from the start of fabrication, to heat treatment, to stress relieving and machining. Taking the necessary time for building the base is crucial for the stability of the whole machine and its longevity.

Laser sources can be obtained from German, USA, UK, or Chinese manufacturers. Different laser-source manufacturers have a range of Fibre Lasers from 300 watts up to 10 KW. (Most sheet metal fabricators in HVAC will require less than 2 KW). There are also many areas to consider regarding pricing. For instance, the cost of a Fibre Laser can increase drastically when adding more power to the laser source. In addition, although leading laser manufacturers are reliable, the brand name can be a reflection of the cost. Some lesser-known laser source providers have less than 1% difference in failure rates compared to top brands.

NAMCOR LASER is pleased to offer various laser source brands and power ratings (according to customer needs), with an affordable opportunity to take HVAC manufacturing to the next level! HVAC sheet metal fabrication is quickly evolving and Fibre Lasers will be at the forefront, changing the way parts and fittings are cut in sheet metal shops across the globe!

THE FUTURE OF *Fibre* IS HERE!



NAMCOR
Lightning
Fibre LASERS
Let there be light