

# MuShield®

AS:9100D | ISO 9001:2015 Certified | ITAR Registered Company



ITAR-Registered  
Manufacturer

## Simplicity Yields Superior Metal Forming Dexterity

Hydroforming is THE metal forming process of choice by the aerospace, automotive, medical, defense, and electronic industries.

Hydroforming process benefits are:

- Great design and shape flexibility.
- Short lead times for dimensionally challenging parts.
- Reduces the need for multiple annealing operations.
- Eliminates additional tooling costs if various thicknesses are required.
- Ability to use different metals with the same tooling.
- Shallow or Deep drawn parts, simple to complicated contours are not a problem.
- Saving time and money on secondary machining operations.
- Uniform exterior finish.





## Hydroforming Progression

### STAGE 1

Flat blank laser cut to a developed size



### STAGE 2

Post draw, the desired shape is formed with excess material creating a flange



### STAGE 3

Final height and cut outs/hole pattern cut in a 5-Axis laser



When it comes to your hydroforming needs, place your trust in MuShield. The MuShield advantage is one of experience, knowledge, and customer-centric practices. The first component of your free consultation is the lost art of listening. We want to hear all about your project and unique hydroforming needs. Our extensive engineering experience allows us to contribute to the design process, if required. Come to us with an idea, and our industry trusted experience can help determine which materials and manufacturing methods will be most efficient and of highest quality to suit your unique needs.

MuShield's hydroforming equipment enables the manufacture of precision sheet metal parts from the following alloys.

- Carbon Steel
- Stainless Steel
- Heat Resistant Alloys
- Non Ferrous Alloys
- Controlled Expansion Alloys
- Glass Sealing Alloys
- High Strength Super Alloys

For Orders and Pricing:  
Contact MuShield today for more information  
[ 888.669.3549 ]