



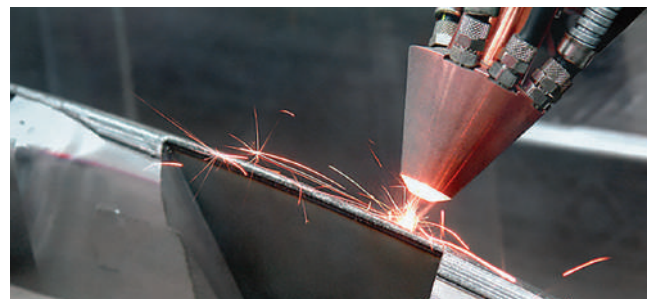
**Laser Speeder -  
The First Machine  
Specifically Designed  
to Repair  
Large Drawing  
Dies**

## Jobs Laser Speeder An Additive Manufacturing Machine

Laser Speeder has been chosen by an important German OEM to equip its plant with an additive manufacturing machine. The Laser Speeder machine has been integrated into an existing FMS where a Jobs eVer 7 milling centre is already installed. Laser Speeder is the first machine specifically developed by Jobs for cladding and hardening of large drawing dies in the automotive field.

### Laser Speeder Features:

- More cost-effective damaged dies repairing compared to manual TIG welding methods. The right welding thickness in the right place, rework by re-welding is eliminated
- Time reduction
- Better quality
- Highly precise cladding up to 0,1mm accuracy, coating thickness up to 2 mm
- Reduced deformation in cladding and hardening due to the low and local heat input
- Compared to robot solution higher accuracy, larger working area and better accessibility to the die, easier programming



# A Machine for Cladding, Hardening, Measuring Operations for Highly Automated Systems Devoted to Large Moulds Machining

## Laser System

The system has been conceived to perform cladding, hardening and measuring operations. The change is easily performed by just changing the mirror from hardening to focusing and mounting the powder nozzle or the probe unit. The choice of this laser system is explained by the fact that today it is more cost-effective to repair a damaged mould with laser than with traditional TIG welding methods as done in the past.

Main advantages include reduction in time and definitely better quality in repairing, as material filling can be accurately carried out. Furthermore, the complete elimination of manual operation allows a significant reduction of costs. In particular, Laser Speeder is equipped with a high-power fiber-coupled diode laser complete with internal water-air-cooler device. The machine features also a thermal control unit of the laser power output.



## Laser Beam Cladding

This technology is used to create wear-resistant layers on mechanical components. In this specific application Laser Speeder is used to repair and/or add new complex geometries, through 3D additive manufacturing, on moulds and dies for the automotive field. The selected technology is a diode laser using a Fe-base alloy as filler material. The nozzle is water-cooled.



## Laser Beam Hardening

This application is used to increase hardness on all commercial toughenable steels. Compared to other technologies, like flame or inductor, this system only treats locally reducing the distortion. The temperature control ensures high process reliability and excellent quality even on complex geometries and contours.

## Technical Data

<b>X-axis</b>	mm	6000/7000
<b>Y-axis</b>	mm	3500
<b>Z-axis</b>	mm	1500
<b>Pallet size</b>	mm	5000x2500x250
<b>Workload capacity</b>	kg	30000
<b>Distance worktable/cabin</b>	mm	2500
<b>Axes speed</b>	m/min	50
<b>C1-axis</b>	°	±200
<b>B-axis</b>	°	±120
<b>C2-axis</b>	°	±200
<b>CNC</b>		Siemens 840D SL

