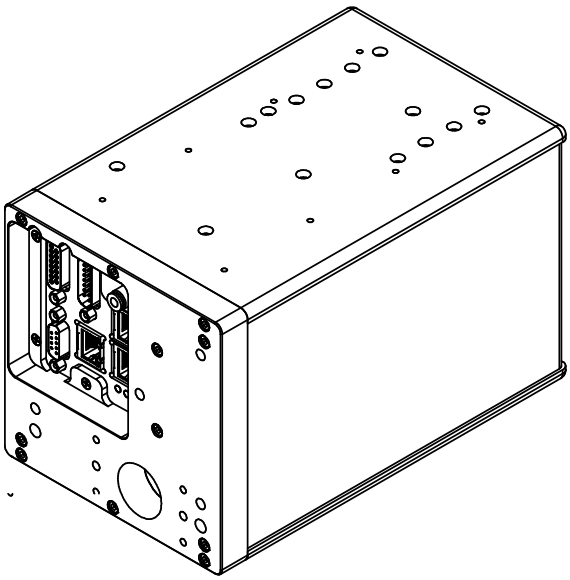
SH15G *15 mm Scanhead*

Highest Speed, Low Drift Digital State Space based Scanhead



Digital Control
- Digital State Space Control
- Direct Mirror Control
- No Tracking Error
- Auto Tuning

Digital Input
- XY2-100
- Optional Marking Engine on board
- Optional Sercos III interface

Options
- Drift reduced version available
- Water cooling available for demanding applications

Our model based Digital State Space controller enables unseen marking speeds due to its unique design. Especially demanding wobble or drill applications benefit from the huge bandwidth coming along with our model based approach. In addition our on board Ethernet interface allows the communication to an optional built in marking engine as well as the glueless exchange of status and real time information with any host computer. This model can also be equipped with a Sercos III field bus interface

Power Supply	
Voltage Rating	±15V .. ±28V
Required Current[1]	4-12A RMS, 10-30A pk
Ripple	<200mV
Noise	≤0.5% DC to 30 MHz

General Spec	
Ambient Temperature	+15°C .. +35°C
Weight	~4.9Kg

Beam Steering	
Aperture:	15 mm
Typical Scan Angle:	±21° opt.
Resolution:	18 bit, 1.5µrad
Dither[2]:	< 4.5 µrad
Offset Drift[3]:	< 15 µrad/°C
Gain Drift[3]:	< 50 ppm/°C

Dynamic Specs	
Wobblefreq[4].@ 0.01°	6000 Hz
Wobblefreq[4].@ 0.1°	3000 Hz
Wobblefreq[4].@ 1°	1000 Hz
Writing Speed[5]	900 cps
Tracking Error	0 µs

All angles are in mechanical degrees if not stated differently.

(1) Application dependent
(2) Standard deviation of the motor position in case of a constant command within typical scan angle.
(3) Per axis in standard configuration. Can be three times improved in drift reduced version
(4) Possible wobble frequency at the given amplitude (°optical)
(5) 1mm single stroke character with F-Theta objective, f = 160 mm