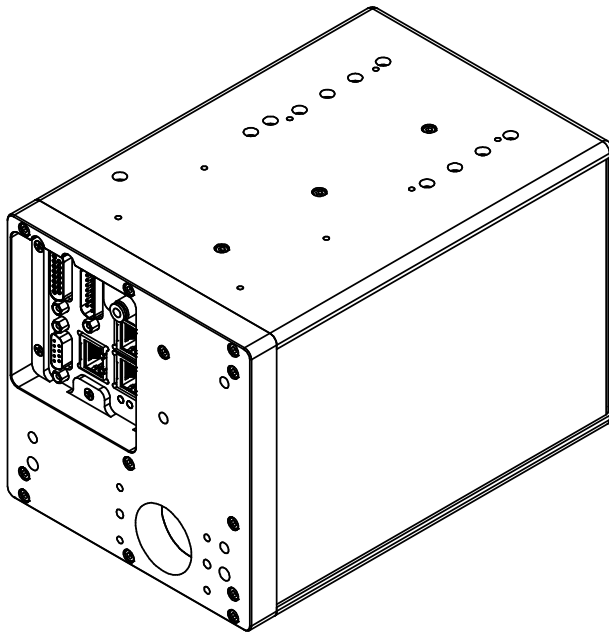


# SH30G 30 mm Scanhead

*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

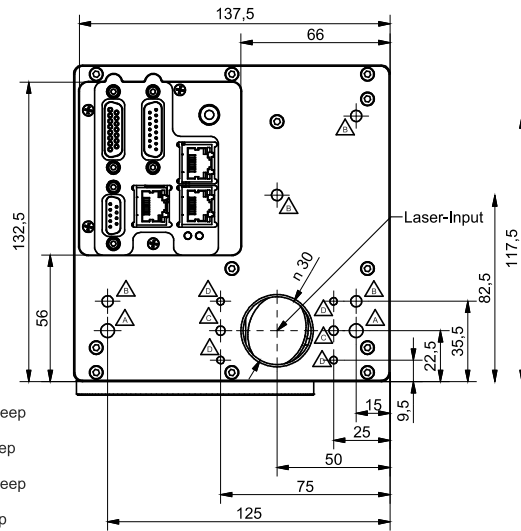
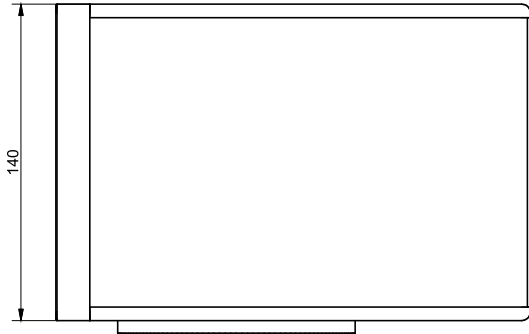
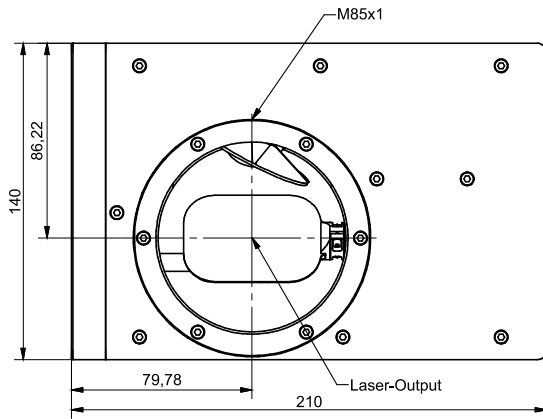
Our model based Digital State Space controller enables unseen marking speeds due to its unique design. Especially demanding wobble or drill applications benefit from the huge bandwidth coming along with our model based approach. In addition our on board Ethernet interface allows the communication to 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		General Spec	
Voltage Rating	±15V .. ±28V	Ambient Temperature	+15°C .. +35°C
Required Current <sup>1</sup>	4-15A RMS, 10-40A pk	Weight	~6.5Kg
Ripple	<200mV		
Noise	≤0.5% DC to 30 MHz		

Beam Steering		Dynamic Specs	
Aperture:	30 mm	Wobblefreq <sup>4</sup> .@ 0.01°	2900 Hz
Typical Scan Angle:	±21° opt.	Wobblefreq <sup>4</sup> .@ 0.1°	1500 Hz
Resolution:	18 bit, 1.5µrad	Wobblefreq <sup>4</sup> .@ 1°	550 Hz
Dither <sup>2</sup> :	< 4.5 µrad	Writing Speed <sup>5</sup>	300 cps
Offset Drift <sup>3</sup> :	< 15 µrad/°C	Tracking Error	0 µs
Gain Drift <sup>3</sup> :	< 50 ppm/°C		

**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



- △ Ø6H7 x 6 deep
- △ M6 x 12 deep
- △ Ø4H7 x 6 deep
- △ M4 x 8 deep