



Down2Earth bv  
 Rue Zénobe Gramme, 13  
 4710 Lontzen - BELGIUM  
 VAT ID - BE 0898.388.858

Phone: +32 87 275 946  
 Mobile: +32 476 740 876  
 info@down2earth.com  
 www.down2earth.com

## Microtunneling ELS1 Target Guidance System, fully serviced by manufacturer with warranty

We supply different types of guidance systems, fully serviced by manufacturer or new.

### For Sale & For Rent

#### Specifications ELS1 and ELS2

case	ELS 1	ELS 2
dimensions (without mounting appliance)	330 x 135 x 80 mm	330 x 166 x 108 mm
material	hard aluminium alloy	
weight	ca 5,2kg	ca 8,7kg
protection	IP68 , watertight up to 5m depth, filled with dry nitrogen	
mounting appliance	M6 tapped holes in frontframe, guide rod at rear end	3-point head mounting, rear pin additionally M8 threaded
<b>environment</b>		
storage temperature	-30 to + 70 °C	
operating temperature	-10 to +50 °C	
shock	100g	
<b>optics</b>		
laser power	1 to 3mW	
wavelength	633nm (HeNe-Laser) / 635nm (diodelaser)	
mode	TEM00	
distance to laser	depends on laser and environment (dust)	
measurement and accuracies		
horizontal displacement:		
range	115mm	146mm
accuracy	1mm	
<b>vertical displacement:</b>		
range	60mm	88mm
accuracy	1mm	
<b>yaw angle :</b>		
range	±5°	
accuracy	1mrad (1σ)	
<b>pitch angle :</b>		
range	±15°	
accuracy	1mrad (0,1mrad short time stable)	
<b>roll angle:</b>		
range	±40° (±8°)	
accuracy	0.1° (0.05)	
transmission period:	every 500ms	
<b>calibration and maintenance</b>		
calibration	by manufacturer, data permanently stored in ELS device	
maintenance by manufacturer	suggested interval: 3000 working hours	
operating time	automatically logged in ELS unit	