

## CRYO STAGE o2 (CS02)



### Features

- Orthogonal xyz motion
- High lifting capacity of 1kg
- XYZ scan range 2 micron at 4K
- 20 mK to 375K, vacuum compatible
- Non magnetic CBS10 positioners for XY
- A CLA2601 positioner for Z
- Fits a 50mm bore
- Resistive Linear Sensor option "RLS"
- Gold coated OFHC reference frame, accessory

### Description / Applications

The CS021 offers orthogonal xyz positioning with high load capacity in a compact and robust package. It combines 2 CBS10 positioners for xy motion with a CLA2601 positioner for vertical motion. The latter allows the CS021 to take loads up to 1kg. Sensors with absolute position output can be fitted on all axes when closed loop positioning is required. The detachable reference frame offers users a rigid and stable surface to attach for instance probes or cooling braids close to the sample table. It is made of gold plated OFHC for highest thermal conductivity.

### Specifications

specs	unit	CS021	CS021-RLS
<b>SYSTEM SPECIFICATIONS</b>			
Active axes	-	3	
Type of motion	-	x, y, z, orthogonal	
Step range	mm <sup>3</sup>	10 x 10 x 5	
Scan range @ ambient *	μm <sup>3</sup>	10 x 10 x 10	
Scan range @ 4K *	μm <sup>3</sup>	2 x 2 x 2	
X and Y positioner (including scanning) **	-	CBS10	
Z positioner ***	-	CLA2601	
Z scanning actuator	-	piezo ceramic	
Z-scanner sensitivity @ ambient	nm/V	66	
Z-scanner sensitivity @ 4 K	nm/V	13	
Endstops ****	-	xy +/- 5mm and z +/- 3mm	
Main construction materials	-	Titanium, Aluminium, Stainless steel	
Load capacity	grams	1000	
Operating temperature	K	0.02-375	
Mass	grams	200	230
<b>DRIVE ELECTRONICS</b>			
Controller/driver	-	CAB-230(115), CADM2	
Sensor readout	-	N/A	RSM
Scanner module for z-scanner	-	CADM2 or PSM, PSMIL	
* Specified scan ranges assume use of CADM2 -20 to +130V, 10 bits resolution, setpoint rate approx. 10Hz. Alternative for z-scanner only: PSM amplifier with PSMIL -20V to +130V. By disconnecting the PSMIL high voltage bipolar operation is possible to increase the range. This is only allowed at deep cryogenic temperatures and -150V to +150V is not to be exceeded!			
** See CBS product page for detailed information.			
*** See CLA product page for detailed information			
**** xy endstops can be touched without problems. Touching z endstops is ideally avoided and can be prevented by using the RLS position feedback option. Touching them should not cause damage but could require manual action to free it.			