

CERN name (MTF) HCTCLP\_001-CQ000407  
 CERCA name TCLP\_090  
 MADX name TCL.4L5.B2

ID  
 Angle 0.0  
 Material CU  
 Length 1.0  
 Beam B2  
 Family TCLP  
 IP IP5

BLMI BLMEI.04L5.B2E10\_TCL.4L5.B2  
 BLMS BLMES.04L5.B2E10\_TCL.4L5.B2

Jaw corner notation

LEFT UP	B
LEFT DOWN	D
RIGHT UP	A
RIGHT DOWN	C

AXIS_A	1
AXIS_B	1
AXIS_C	1
AXIS_D	1
AXIS_E	0

AXIS_LEFT_UP	1
AXIS_LEFT_DOWN	1
AXIS_RIGHT_UP	1
AXIS_RITGH_DOWN	1
AXIS_TANK	0

Mechanical STOPS

	OUT	IN
LEFT UP	29.98714376	-6.055827807
LEFT DOWN	29.9784783	-6.054515317
RIGHT UP	-29.99292354	6.022015734
RIGHT DOWN	-29.99640175	6.016153017
ANTI - UP	0.34039707	
ANTI - DOWN	0.34065897	

Measurements in the metrology frame:

	OUT	IN
A	-29.99292354	6.022015734
B	29.98714376	-6.055827807
C	-29.99640175	6.016153017
D	29.9784783	-6.054515317

Mechanical stops

Max gap	AB	59.98006730
	CD	59.97488005
Min gap	AB	0.34039707
	CD	0.34065897

Switches

	OUT	IN
LEFT UP	29.71714376	-5.735827807
LEFT DOWN	29.6184783	-5.714515317
RIGHT UP	-29.63292354	5.662015734
RIGHT DOWN	-29.66640175	5.686153017
ANTI - UP	0.44039707	
ANTI - DOWN	0.44065897	

Switches

	OUT	IN
A	-29.63292354	5.662015734
B	29.71714376	-5.735827807
C	-29.66640175	5.686153017
D	29.6184783	-5.714515317

Switches

Max gap	AB	59.3500673
	CD	59.2848800
Min gap	AB	0.44039707
	CD	0.44065897

Maximum flatness error

Left	-0.029132105
Right	0.024857962

Maximum flatness error (mm)

AC	0.024857962
BD	-0.029132105

Mechanical plays

Left UP	0.022
Left DOWN	0.019
Right UP	0.036
Right DOWN	0.037

Mechanical plays

A	0.036
B	0.022
C	0.037
D	0.019

Auto-retraction

Left UP	2.77
Left DOWN	0
Right UP	16.608
Right DOWN	14.832

Auto-retraction

A	16.608
B	2.770
C	14.832
D	0.000

Maximum tilt angle

Left Plus	3.60
Left Minus	3.30
Right Plus	3.40
Right Minus	3.44

Maximum tilt angle

AC Plus	3.40
AC Minus	3.44
BD Plus	3.60
BD Minus	3.30

Transverse tank position

Stop UP	
Switch UP	
Set point	
Switch DOWN	
Stop DOWN	

Detailed flatness data  
Left jaw on mech. Stop IN

Long. Pos. [cm]	z = -20mm	z = 0 mm	z = +20mm
270	-6.052248542	-6.055827807	-6.058684837
425	-6.057690944	-6.058118686	-6.060676757
580	-6.065131062	-6.053338067	-6.062460672
735	-6.055428548	-6.052805569	-6.048503282
890	-6.058185306	-6.075187978	-6.060885786
1045	-6.077902927	-6.081937673	-6.078217513
1200	-6.055019313	-6.054515317	-6.059046482

Detailed flatness - Jaw AC on mech. Stop IN

Long. Pos. [mm]	z = -20mm	z = 0 mm	z = +20mm
270	6.005082573	6.022015734	6.037338853
425	6.008935285	6.016812388	6.025569469
580	5.996570617	6.018013252	6.024193567
735	6.017833614	6.041010979	6.053187728
890	6.023178440	6.038359312	6.047500408
1045	6.024174715	6.026619196	6.034659917
1200	6.014361726	6.016153017	6.033192907

Detailed flatness data  
Right jaw on mech. Stop IN

Long. Pos. [cm]	z = -20mm	z = 0 mm	z = +20mm
270	6.005082573	6.022015734	6.037338853
425	6.008935285	6.016812388	6.025569469
580	5.996570617	6.018013252	6.024193567
735	6.017833614	6.041010979	6.053187728
890	6.02317844	6.038359312	6.047500408
1045	6.024174715	6.026619196	6.034659917
1200	6.014361726	6.016153017	6.033192907

Detailed flatness - Jaw BD on mech. Stop IN

Long. Pos. [cm]	z = -20mm	z = 0 mm	z = +20mm
270	-6.05224854	-6.05582781	-6.05868484
425	-6.05769094	-6.05811869	-6.06067676
580	-6.06513106	-6.05333807	-6.06246067
735	-6.05542855	-6.05280557	-6.04850328
890	-6.05818531	-6.07518798	-6.06088579
1045	-6.07790293	-6.08193767	-6.07821751
1200	-6.05501931	-6.05451532	-6.05904648

Screw Serial Number

LEFT UP	8092495-85
LEFT DOWN	8092495-25
RIGHT UP	8092495-39
RIGHT DOWN	8092495-60

Screw S N

A	8092495-39
B	8092495-85
C	8092495-60
D	8092495-25