

# LGS WFS Unit

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Mechanisms and required accuracy

LOCATION	TYPE	RANGE OF TRAVEL	MIN. STEP SIZE	TOTAL NUMBER	TOTAL COUNTS		
					MECHANISMS	ENCODER COUNT	LIMIT SWITCH
1 LGS CHANNEL (UNIT FOCUS)	$\Delta Z$	$\sim 10$ mm	10 $\mu$ m	9	53	53	106
2 LGS CHANNEL (LENSLET XY STAGE)	$\Delta X, \Delta Y$	$\Delta X \sim 10$ mm $\Delta Y \sim 1$ mm	5 $\mu$ m (for 14 pix) " "	18			
3 LGS CHANNEL (DETECTOR FOCUS)	$\Delta Z$	Few mm	1 $\mu$ m	9			
4 PICK-OFF $\theta 1$ mechanism	$\Delta \theta$	$360^\circ$	0.2" $\equiv 145 \mu$ m in F/P $\approx 1/5$ " (180mm) in detector	8			
5 PICK-OFF $\theta 2$ mechanism	$\Delta \theta$	$360^\circ$	0.2" $\equiv 145 \mu$ m in FP $\approx 300$ " (30mm in detector)	8			
6 LGS WFS unit Focus	$\Delta Z$	$\sim 130$ mm	$\sim 0.5$ mm (bracket) (this redundancy by 1)	1			

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