## Screw gauge (Measurement with zero errors)

Zero error	Observed reading	Corrected reading
0 5 0 45	0 5 35 30 25	No zero error correction
No zero error	$6.5 + 30 \times 0.01 \text{ mm}$ = $6.8 \text{ mm}$	6.8 mm
0 10 5	0 1111111 30 25	Positive zero error is subtracted from the observed reading.
Positive zero error of +0.05 mm	$6.5 + 27 \times 0.01 \text{ mm}$ = $6.77 \text{ mm}$	6.77 - (+0.05)  mm = $6.72 \text{ mm}$
0 0 45 45 40	0 15 10 5 5	Negative zero error is added to the observed reading.
Negative zero error of $-0.05 \text{ mm}$	$6.5 + 9 \times 0.01 \text{ mm}$ = 6.09 mm	6.09 - (-0.05)  mm = $6.14 \text{ mm}$