



FREEMANS
PRECISION

DIAL ***CALIPER***

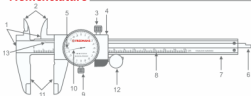


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USER MANUAL



Nomenclature



- ❶ Step Measuring Faces
- ❷ Inside Measuring Faces
- ❸ Clamping Screw
- ❹ Slider
- ❺ Bezel Scale
- ❻ Depth Measuring Blade
- ❼ Beam
- ❽ Main Scale
- ❾ Bezel Locking Screw
- ❿ Needle
- ⓫ Outside Measuring Faces
- ⓬ Thumb Roller
- ⓭ Gear Rack

Technical Specifications

Measuring Range	FVD150	0-150mm 0-6in
	FVD200	0-200mm 0-8in
	FVD300	0-300mm 0-12in
Accuracy	FVD150	±0.03mm 0.0012in
	FVD200	±0.03mm 0.0012in
	FVD300	±0.04mm 0.0016in
Resolution	0.02mm (0.001in)	
Material	Stainless Steel	
Working Temperature	5°-40°C 41°-104°F	
Humidity	Of no importance below 80% of relative humidity.	

Preparation for Work _____

- 1) Before measuring, use a soft cloth to clean the measuring and sliding surfaces. The Caliper can be lubricated with a small amount of oil for smooth sliding.
- 2) Before you begin taking measurements with the Dial Caliper, ensure that the zero line of the main scale and the bezel needle are at zero. If the needle does not point to zero, loosen the bezel locking screw and rotate the bezel until the needle points to zero and no gap can be observed between the jaws in the light.
- 3) The slider may be moved only when the clamping screw has been unlocked. Tighten this screw to lock the measurement, if the object needs to be removed before taking the reading.
- 4) Apply suitable force, and tighten both fine adjustment screws to get an accurate measurement.

Multiple Measuring Applications _____

Outside measurement



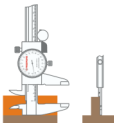
Inside measurements



Depth measurement



Step measurement

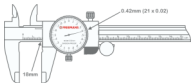


How to read your measurements _____

Your reading will comprise of the sum of the main scale and Bezel scale reading :

- 1) Use the main scale to get your reading, X
- 2) Take the Bezel scale reading at the graduation scale and count number of lines, Y Will be Number of lines $\times 0.02$.
- 3) Your reading will be the sum of X and Y (X+Y)

0.02 mm



$$X = 18 \text{ mm} \quad Y = 0.42 \text{ mm}$$
$$X+Y = 18.42 \text{ mm}$$

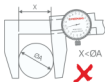
Precautions _____

- 1) The Caliper should not be used to measure a workpiece if it is rotating, this is dangerous and will wear out the measuring faces.
- 2) If cutting chips get into the gear rack during measurement, the dial gauge may be damaged.

Common Measuring Errors _____

Application of unnecessary force could lead to inaccurate jaw position and inaccurate measurements.

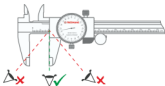
1)



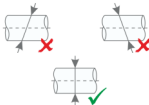
Common Measuring Errors

To avoid a visual/parallax error, view from a perpendicular direction when reading the Vernier scale.

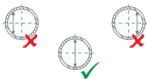
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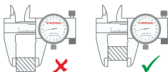
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4)

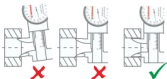


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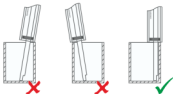


Common Measuring Errors

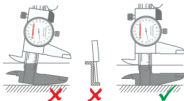
6)



7)



8)



Maintenance Instructions

- 1) Keep the Caliper clean and dry.
- 2) Liquid can damage the slider.
- 3) Measuring surfaces should be cleaned gently with cotton fabrics.
- 4) Never use petrol, acetone, and the other organic solvents.





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Warranty

All **FREEMANS** Precision products are guaranteed for **1 year from the date of sale** against manufacturing defects. This guarantee does not cover damage due to modifications, misuse or fair wear and tear.

*Please Retain this Instruction Manual or Sale Invoice
in Order to Claim Your Warranty (If Applicable).*

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