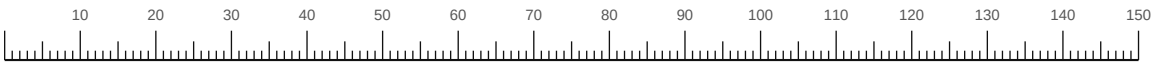


Variator Roller Measurement Sheet

Diameter, width and weight are three separate things, and a roller set is only interchangeable on all three. A record sheet with true-size circles and a weighing block.

Rollers are described by two dimensions and a weight. Ordering on weight alone is the commonest mistake, because the same weight is sold in more than one size.

PRINT CALIBRATION — CHECK BEFORE MEASURING



Lay a steel rule along this scale. The 150mm mark must fall at exactly 150mm. If it does not, reprint at 100% / "Actual size" with page scaling off — every measurement you take from a scaled sheet will be wrong.

WHAT THE NUMBERS MEAN

How a roller size is conventionally written

WRITTEN AS	MEANS	MEASURED HOW
16 × 13	16mm diameter, 13mm width	Diameter across the round face; width along the axis
A weight in grams	Mass of ONE roller, not the set	On a scale reading to 0.1g if you have one
A set of six	Six rollers of equal weight	Weigh each — uneven sets are common and are a fault

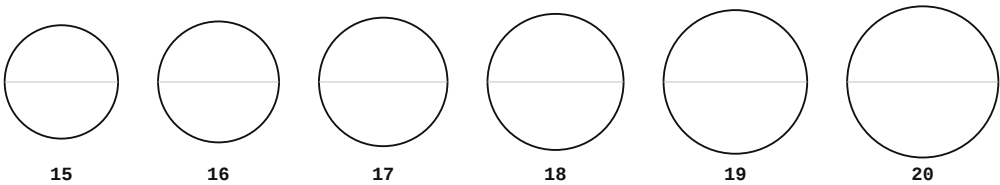
A WORN ROLLER MEASURES SMALLER THAN IT WAS SOLD AS

Rollers wear a flat where they run against the ramp. Measured across that flat, a roller sold as 16mm can read 15.2mm. Always measure across the widest part you can find, and treat the result as a minimum — if it measures 15.6mm it was almost certainly a 16.

MEASURING DIAMETER

Rollers wear flat on the face that runs against the variator ramp. A worn roller measures smaller across the flat than across the round, so take the measurement across the widest point you can find and treat it as the minimum — the roller was originally at least that size, and probably the next standard size up.

TRUE-SIZE CIRCLES — STAND A ROLLER ON THESE



MEASURING WIDTH

VARIATOR ROLLER MEASUREMENT SHEET

TRUE-SIZE WIDTH BARS — LAY A ROLLER ON ITS SIDE ACROSS THESE

12 mm

13 mm

14 mm

15 mm

16 mm

17 mm

YOUR ROLLERS

Weigh and measure each one separately. Uneven wear across a set is itself a diagnosis: it usually means the rollers have been sticking rather than rolling.

ROLLER	DIAMETER MM	WIDTH MM	WEIGHT G	FLAT SPOT?	MARKINGS ON ROLLER

NUMBER OF ROLLERS FITTED

TOTAL SET WEIGHT

 g

WEIGHT PER ROLLER AS SOLD

 g

WEAR INSPECTION

- ☐ Flat spots on any roller
The roller has been sliding, not rolling
- ☐ Rollers of visibly different diameters in one set
- ☐ Cracked or crumbling outer material
- ☐ Scoring or grooves worn into the variator ramp plate
- ☐ Grease or oil inside the variator
Something is leaking where it should not
- ☐ Ramp plate sliders worn or missing

THE MACHINE

MAKE AND MODEL

ENGINE SIZE

 CC

ENGINE FAMILY NUMBER

VARIATOR ROLLER MEASUREMENT SHEET

VARIATOR OUTSIDE DIAMETER	BELT MARKING	DATE MEASURED
mm		

WHAT YOU WERE TRYING TO CHANGE, AND WHAT HAPPENED

THIS SHEET RECORDS, IT DOES NOT RECOMMEND
Nothing here tells you which part to buy. It tells you what you currently have, in the units a seller works in. Machines built to the same nominal specification were fitted with different components by different suppliers, sometimes inside one model year, so the only reliable reference is the item in your hand.

Need to work out what you actually own?

The Scooter Parts Registry is a free public record of the Chinese factories behind US-market scooters, ATVs and go-karts — brand, engine family, VIN prefix, factory and related machines. No account, no email.

thescooterparts.com/identify