What to measure before replacing a residential lock

Why measuring matters before a lock swap

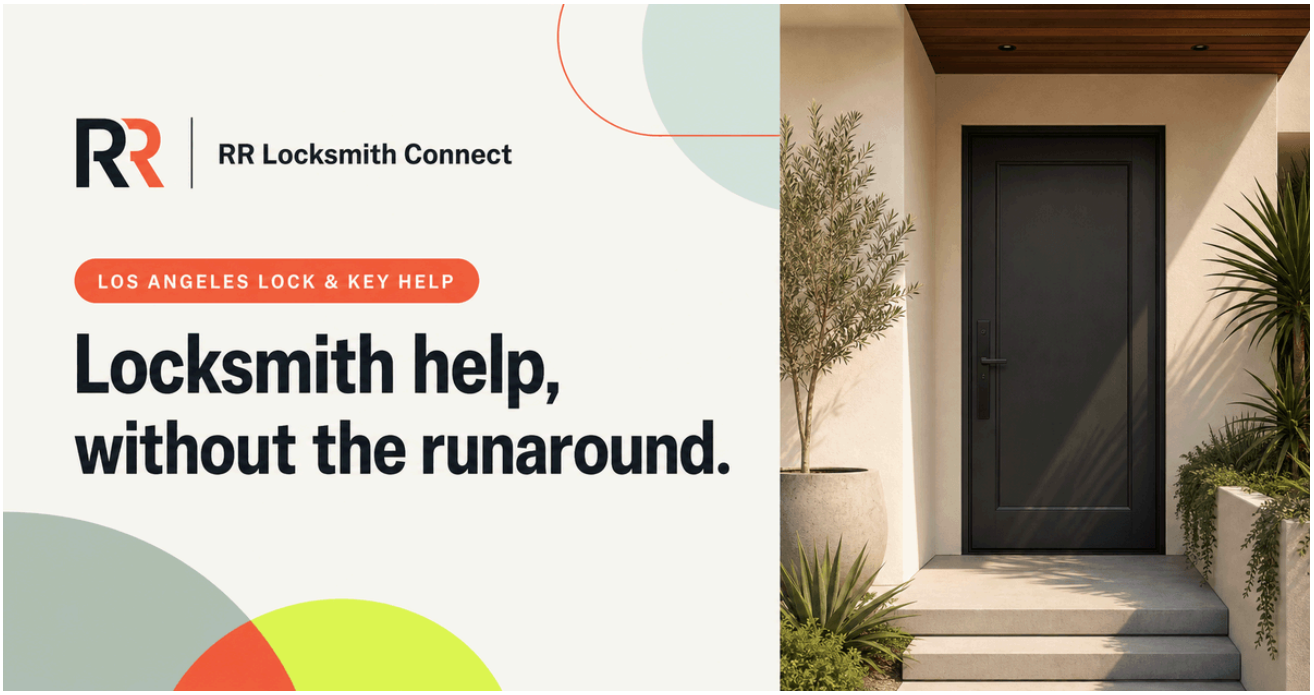
A residential lock looks like a simple swap: unscrew the old one, screw in the new one. But anyone who has stood in a hardware aisle with a deadbolt in one hand and a vague sense of doubt in the other knows that fit is everything. A lock that does not align with the existing holes leaves you with a door that is weaker, harder to close, or simply unfinished. Before you buy a replacement, take a few minutes to check the dimensions and details of the current hardware. The same careful measurements help if you are considering lock rekeying instead of a full replacement. Whether you rekey or replace, the starting point is the same: know what you have.

Backset: the distance that decides fit

The backset is the measurement from the edge of the door to the center of the lock's bore hole. Two standard backsets exist: 2-3/8 inches and 2-3/4 inches. Most residential doors use one of these, but older doors or custom builds can differ. Measure the backset on the current lock by removing the latch faceplate and measuring from the edge of the door to the center of the cross-shaped slot where the lock mechanism sits. If the new lock has a different backset, the latch will not reach the strike plate, or the deadbolt will sit too far inside the door edge. Some modern locks come with an adjustable backset, but not all do. Check the product specifications before buying. A mismatch means returning the lock or drilling a new hole, which is not a simple job on a finished door.

Cross bore diameter: the hole the lock lives in

The cross bore is the large hole drilled through the face of the door to accommodate the lock body. Standard cross bore diameters are 2-1/8 inches, though some older locks use 1-1/2 inches or 1-3/4 inches. Measure the diameter of the existing hole with a ruler or tape measure. If the new lock's cylinder housing is larger than the current hole, the lock will not fit without enlarging the hole. If it is smaller, you will need a trim ring or adapter plate, which may not be included. For those who want to keep the same lock but change the key, lock rekeying avoids this fit issue entirely because the same hardware stays in place. A rekey changes the internal pins so the old lock works with a new key, saving the trouble of matching bore sizes.



Door thickness: the unsung variable

Residential doors come in several standard thicknesses: 1-3/8 inches for interior doors, 1-3/4 inches for exterior doors. But not every door follows the standard. Measure the thickness of the door at the edge where the latch sits. A lock designed for a 1-3/4-inch door will have a cylinder that is too long for a 1-3/8-inch door, leaving the keyway recessed or the thumb turn protruding awkwardly. Conversely, a lock meant for a thinner door will not have enough thread engagement on a thicker door, making the installation insecure. Some lock sets include adjustable-length screws or spacers, but the body of the lock itself must match the door thickness within a small range. If the thickness is unusual, a custom or universal lock may be needed, or a rekey of the existing lock becomes the simpler path.

Strike plate and latch alignment

The strike plate is the metal piece on the door frame that receives the latch or deadbolt. Its shape and screw hole pattern vary by manufacturer. Before buying a replacement lock, check whether the new strike plate will line up with the existing mortise (the recess cut into the frame). If the new plate is wider or taller, you may need to enlarge the mortise, which requires a chisel and some skill. If the screw holes do not match, you will be drilling new holes into the frame, potentially weakening it if the previous holes are close by. An alternative is to reuse the old strike plate if the new lock's latch fits through it. That option works only when the latch dimensions are the same. For a deadbolt, the depth of the latch bolt and the position of the bolt hole in the frame also matter. A misaligned strike plate can cause the door to stick or the

lock to bind. In many cases, lock rekeying avoids these alignment issues because the strike plate and latch stay exactly where they are. The only change is inside the cylinder.

Handing: left or right, inswing or outswing

Doors have a handedness: left-hand, right-hand, inswing, outswing. A lock designed for a right-hand inswing door may not work correctly on a left-hand outswing door. The thumb turn, keyway orientation, and latch bevel direction all depend on handing. Check the current lock's handing by standing on the outside of the door (the key side). If the hinges are on your left, it is a left-hand door; if on your right, it is a right-hand door. Then note whether the door swings inward or outward. Many modern locks are reversible, meaning you can flip the latch or rotate the thumb turn to suit either handing. But some budget models are fixed. A wrong-handed lock will have the thumb turn upside down or the keyway facing the wrong way, which is both inconvenient and a potential security weakness because the lock may not latch fully. If the handing is unusual, or if the door is a custom size, rekeying the existing lock keeps the handedness correct without any guesswork.



Battery backup for smart locks

If you are replacing a standard deadbolt with a smart lock or keypad model, you add another layer of measurement: battery compartment size and backup power. Smart locks typically use

four AA batteries or a proprietary pack. The lock body must have enough internal space for the batteries without protruding into the door or interfering with the latch mechanism. Check the depth of the cross bore and the thickness of the door to ensure the battery compartment fits flush. Also, consider whether the lock offers a battery backup option, such as a 9V terminal on the outside, in case the batteries die while you are locked out. Some smart locks also require a continuous Wi-Fi or Bluetooth connection, which may affect battery life. A low battery warning is standard, but the actual runtime depends on usage and temperature. If the lock does not fit the door's dimensions properly, it may not seal against weather, leading to moisture damage in the battery compartment. For those who want the convenience of keyless entry without the fit worries, staying with a mechanical lock and using lock rekeying to update access keeps things simple. The battery backup consideration disappears entirely.

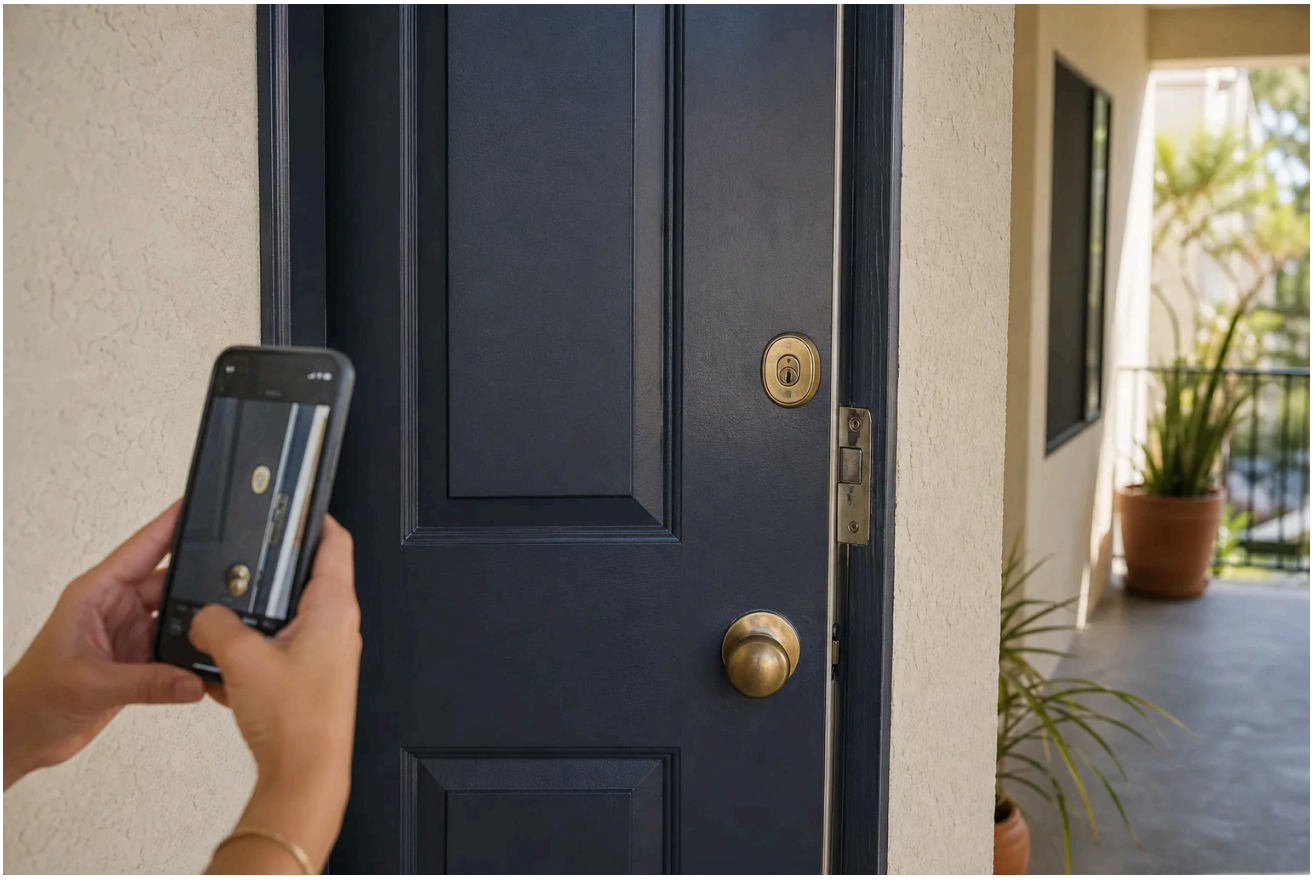
Tenant turnover and master keying

For landlords and property managers, replacing locks between tenants can become expensive quickly. Each new tenant means a new set of keys and possibly a new lock. Measuring each door for a replacement is time-consuming. An alternative is to have a master key system that allows rekeying of existing cylinders without removing them from the door. This is where lock rekeying shines. A locksmith can change the pins inside the cylinder so the old key no longer works and a new key does, all without altering the hardware or the door. The same measurements that matter for a replacement, backset, cross bore, door thickness, strike plate alignment, do not change during a rekey. For a property with multiple units, a master key system allows the property manager to have one key that opens all doors while each tenant has a unique key for their own unit. This approach saves the cost of buying new locks and avoids the fit issues that come with mismatched hardware. When tenant turnover is frequent, rekeying is often the faster and more reliable option.

When to rekey instead of replace

Rekeying is not always the right answer. If the lock is physically damaged, worn out, or a low-security model, replacement may be the better choice. But if the lock is in good condition and the only issue is key control, rekeying is a straightforward fix. The process involves removing the cylinder, extracting the old pins, and inserting new pins that match a different key. It takes a locksmith roughly 10 to 15 minutes per lock. For the same cost as a basic lock replacement, you get the same hardware with new keys. The measurements you would take for a replacement are still useful: they tell you whether the lock is a standard size and whether a rekey is possible. Most residential cylinders are rekeyable, but some cheap models have a crimped or sealed cylinder that cannot be disassembled. In that case, replacement is the only option. Knowing the brand and model of your current lock helps a locksmith determine if a

rekey is feasible. Services like rrlocksmithlosangeles.com can connect you with providers who carry the right tools and pins for your specific cylinder type.



Measuring before you act saves time and money. A tape measure, a few minutes of attention, and a clear understanding of the door's dimensions prevent the frustration of a lock that almost fits. Whether you decide to replace or rekey, the same numbers guide the decision. For most residential situations, lock rekeying is a practical choice that avoids the measurement headaches altogether. But if you do go the replacement route, measure twice and buy once. The right fit keeps your door secure and your daily routine smooth.