Cable/Coil Lock

Cable/Coil locks vary enormously in weight and strength.

The lock design typically consists of a length of plastic coated steel cable combined with a locking mechanism, either integrated or separate (such as a padlock or mini D-lock). Common integrated locking mechanisms include: barrel and key, pin and key and combination. The cable components of such locks come in a variety of diameters, between 8mm and 50mm with associated variations in strength and weight.

Lock specification determines lock performance. Whilst cables between 5mm and 20mm diameter may reduce opportunist theft of bike components it will do little to resist a determined thief as locks of this specification can be easily cut.

Thicker cable locks offer more protection as the larger diameter of cable means more material for a potential thief to cut through. 'Armoured' cable locks provide the greatest security of all cable and coil lock types. 'Armoured' cables benefit from multiple hardened steel shells that encase the steel cable (imagine overlapping beads on a string). The segments of the steel sleeve 'spin' if attacked with a sawing or rotating action, offering some protection against hacksaws and rotary saws/angle grinders, (an instance of 'target softening'). The steel casing also offers the steel cable core some protection against cutting.

Coil locks are 'sprung' cable locks. The cable returns to a coiled configuration when not stretched out in use. This makes the cable easier to carry, sometimes using a frame mount. Typically only narrow gauges of steel cable are coiled, making coil locks light and/flexible and only of real value as secondary locks for wheels and saddles.

Cable and coil locks are light and flexible enough to be carried easily on the body or in a bag.

Cable/Coil systems are vulnerable to cutting.

Weight:

From 0.845kg-1.7kg.

Dimension:

Length from 800-1200mm.

Cable diameter 8 - 25mm (Armoured cables are of increased diameter).

Usability:

Generally light and long enough to be worn around the body. Quick and easy to span wheel, frame and parking furniture.

Keys and Barrel:

Barrel and key, pin and key and combination (no key).

Bikeoff Performance Rating (BPR):

The table below gives a 'user value' out of thirty, in green, and a 'security value' out of thirty, in red. The total value, out of sixty, gives the overall Bikeoff Performance Rating (BPR). If the Bikeoff Performance rating is in green then the lock is 'user biased', a red rating denotes 'security bias' and a yellow rating indicates an equal performance in relation to user and abuser considerations meaning the lock is a 'good all rounder'. Lock performance is also considered in relation to length of stay to indicate how increased risk (more time parked unattended) impacts on user and abuser values, e.g. lighter, and less secure locks will have a much lower BPF for long stops than for quick stops.

Length of stay	**Quick**	**Short**	**Medium**	**Long**
Weight	6	6	6.3	6.6
Ease of use	6.3	6.3	6.3	6.3
Storage	5.3	5.3	5	5
	17.6	17.6	17.6	17.9
Resistance	12.9	12.9	5.6	4.8
BPR	**30.5**	**30.5**	**23.2**	**22.2**

The user centred values for Cable and Coil locks exceed their abuser centred values by a long way in all but quick and short stay locking scenarios. This reflects the fact that cable and coil locks are easy to carry and use but offer little resistance to a determined thief.

Useful References:

www.WeblinkInFull.com