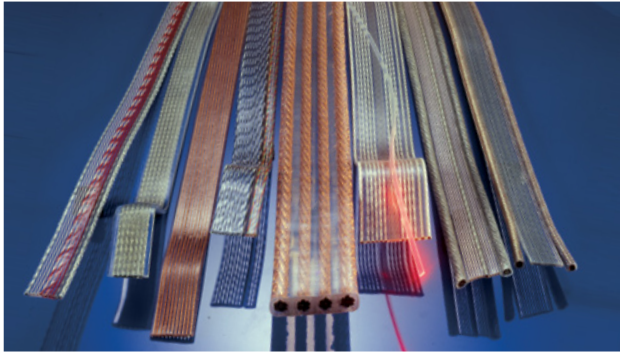




# Extruded Flat Cables VS Round Cables



**VS**



## Extruded Flat Cables

## QUALITY

## Round Cables

<p>The use of flat cable often eliminates much of the conventional wire weight. Its low profile allows them to hug surfaces and take advantage of tight, or normally unused space. Flat cables occupy just 50% of the space of comparable round cables.</p>	<b>VS</b>	<p>Round cables require redundant insulating materials, fillers, tapes, textile wraps, additional layers, and lubricating agents, such as talc. Round cables tend to be bulkier than flat cables and take up more space.</p>
<p>Composite flat cable construction is so mechanically strong that it is not necessary to have large conductors for strength. The copper cross section can thus be reduced to what's required to carry the current load or to satisfy voltage drop requirements.</p>	<b>VS</b>	<p>Round cables have lesser surface-to-volume ratio than flat cables, resulting in the need for larger conductor sizes to handle higher current requirements due to increased heat.</p>
<p>Computer controlled flat cable extrusion process allows for the same exact cable every time you order it and the crystal clear jacket is free of convolutions. Cable is cured continuously, with no debris or material contamination in an automated, climate-controlled environment.</p>	<b>VS</b>	<p>Round cable extrusion does not produce the exact cable every time it is manufactured. In addition, the outer jacket needs to have color additives to hide imperfections and convolutions. Most round cables are manufactured in open air environments exposed to contaminants, such as dirt and dust.</p>

## Extruded Flat Cables

## STRENGTH & PERFORMANCE

## Round Cables

<p>Cable is solid, one-piece construction. Strength is enhanced by the fact that all conductors and insulation equally share tensile loads. Rounded edges of cable absorb stress as well.</p>	<b>VS</b>	<p>Non-parallel conductors in a round cable contribute to unequal load sharing among all of the internal conductors, which limits the overall strength of the cable.</p>
<p>The flat form factor of Cicoil cables provides better heat dissipation than round cables because there is more surface area for a given volume.</p>	<b>VS</b>	<p>Round cables incorporate multiple layers of wires, insulation, and fillers, so heat dissipation can be problematic, especially during repetitive motion cycles.</p>
<p>Each element in Cicoil flat cables are completely surrounded by Flex-Sil™ rubber, ensuring that they do not rub against each other and wear during operation.</p>	<b>VS</b>	<p>Internal wires found inside of round cables can rub against each other, which will wear and, in some cases, impede the overall functionality of the cable in flexing applications.</p>

## Extruded Flat Cables

## VERSATILITY & COST

## Round Cables

<p>Flex-Sil™ jacketing is self-healing from small punctures, and cable damage can easily be repaired in the field.</p>	<b>VS</b>	<p>Any damage to PVC, polyurethane, PTFE, and silicone can't be repaired, necessitating a new replacement cable.</p>
<p>When bent in the same plane of its thin cross section, Cicoil Flat Cables have inherently more flexibility than round cables. The spacing of conductors never changes as the cable moves, so each conductor flexes the same amount in the same plane.</p>	<b>VS</b>	<p>When bent, the inner conductors of a round cable are not held securely within the round bundle causing wires to impede each other's movement, resulting in sticking, friction, and corkscrewing. Unlike a flat cable, the round cable tends to move in a different sequence during each flex cycle.</p>