

Strength is not a matter of size...



COMPACTA

Compacted wire rope – higher breaking strength with the same diameter.



COMPACTA: Because compacted wire rope is far superior to conventional rope design...

To come straight to the point: It is not the finished rope that is compacted, but its strands. This process considerably increases their metallic cross-section and thereby results in a higher filling factor for the strands. It has absolutely positive effects: firstly, the diameter is reduced; secondly, the breaking strength is increased by some 10 percent; and thirdly, it extends the fatigue life of the entire rope.

This last benefit is easy to explain: thanks to the flattened contour of the outer wires, lower surface pressures arise between the wire and the sheave, as well as in the grip jaw. And, with regard to strand contact, the peak tension becomes lower thanks to the larger contact area. Both these aspects are beneficial for the wires, as they reduce the mechanical stress.

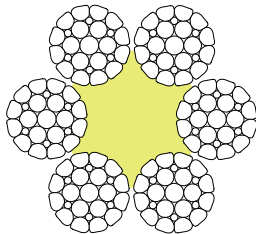
Area instead of punctual contact is the key factor.

In compacted wire ropes, the strands do not settle any further. Their diameter is therefore more stable than of conventional ropes, and they are more resistant to distortion and torque. Another benefit: their surface is almost perfectly smooth, so frictional engagement with the drive components is improved — thereby reducing the wear on grips, sheave and bullwheel liners.

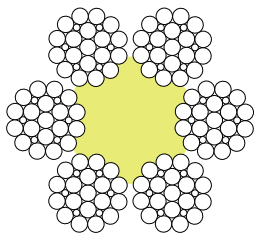
How COMPACTA wire rope is produced...

For COMPACTA mountain wire rope, FATZER uses the die-drawing process. During stranding, the round wires are fed through a specially designed drawing-die, in which the compacting takes place. The diameter of a strand compacted in this way is smaller than that of the composing wires in their original sizes. This is, of course, only possible with highly ductile wires, and also their precise dimensioning must provide for the process.

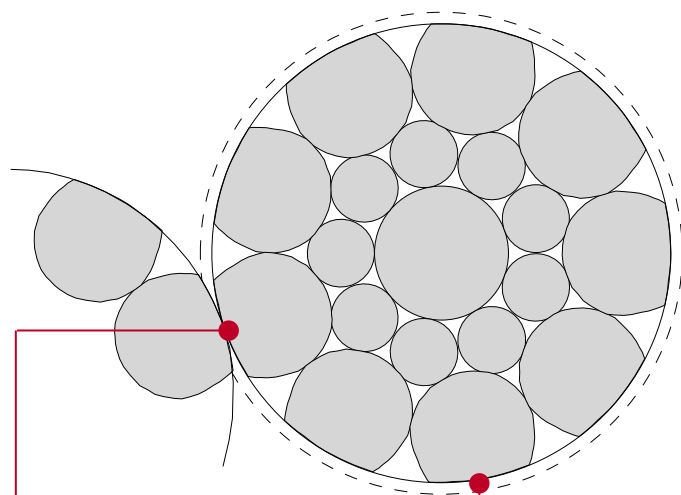
Compacted rope



Conventional rope



The appearance of a COMPACTA wire rope:



Larger contact areas where the strands touch, which reduce the peak tension

Flattened outer wires

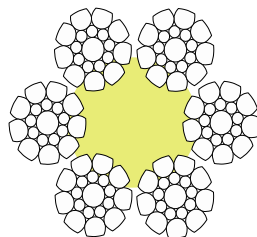
Where COMPACTA wire rope have the edge over conventional products:

- higher breaking strength for a given diameter; or smaller diameter for a given breaking strength
- less wear on grips, line sheave and bullwheel liners
- better stability against distortion and crushing/cross-pressure
- improved damping capability for oscillations and vibrations
- increased fatigue strength thanks to stress-relieved strands and the balanced load-bearing behavior of the individual wire

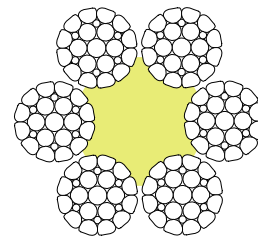
Where COMPACTA mountain wire ropes offer the ideal solution:

In simple terms, the benefits of compacted wire rope come into play whenever the critical aspects such as long service lifetime, good transportation capacity and cost-effectiveness are of decisive interest: because the ratio between the diameter and the breaking force is optimised, the dimensions of sheaves, grips and drive components can possibly be reduced. This also means that capacity can be increased on existing ropeways – with no need to replace the relevant components. Moreover COMPACTA wire rope is predestined for use in systems that demand a high rope mass.

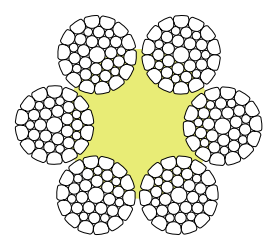
Typical stranded ropes in compacted design...



6x19 Seale, nominal- \varnothing 20 - 36 mm



6x25 Filler Wire,
nominal- \varnothing 32 - 46 mm



6x36 Warrington-Seale,
nominal- \varnothing 43 - 56 mm



Detailed technical information can be called-up on web site (www.fatzer.com) or you are welcome to ask us for the information (phone +41 71 466 81 11, fax +41 71 466 81 10). On request, we will be happy to provide you with our overall catalogue.



People who rely on COMPACTA wire rope...

- 1 Kitzbühel: Austria
- 2 Portland: USA
- 3 Bratislava: Slovakia
- 4 Heavenly: USA
- 5 Kaltenbach: Austria
- 6 Davos: Switzerland
- 7 Plan de Corones: Italy
- 8 Les Arcs: France