



ABOUT C-RAIL®

C-RAIL® is a brand new aerial cabling solution for telecom industry, designed specifically for optical fibre based customer access networks. By delivering several unique features, it resolves significant issues concerning the areal construction of optical-fibre access networks: A pair of a "C" shape messenger and a pre-inserted – *but physically independent*– ultra-compact optical cable creates the "cable" part of the system. Thanks to the performance specific design of all components, the cable can be dropped out and inserted back at any point of the network without cutting the cable, or C-RAIL-MESSENGER or even without window opening request on the C-RAIL-MESSENGER.

Every component of the system is also designed the way to support long distance pulling ability of the pre-inserted cable to create excess cable length at any place where closure installation needed. Further more grounding is no longer required since C-RAIL® uses fibre-reinforced polymers for every product and components like dead-end frames, holding brackets, pole hooks etc. instead of metallic materials. We reach the highest level of customizability on account of rotatable and swivelling components; installation is possible without using any tools.

In combination with a very slim cable sheath ($D = 7 \text{ mm}$), the system is compact, consistent and ultra-flexible (min. excess cable loop diameter $d = 15 \text{ cm}$). These unique features will significantly reduce OPEX costs incurred by optical-fibre areal construction, thereby setting new standards.

WHERE TO USE

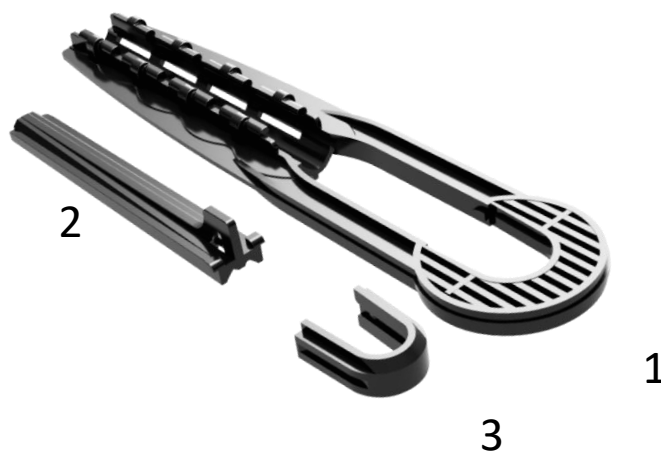
There are six major reasons to use a C-RAIL-ANCHOR:

1. Use C-RAIL-ANCHOR dead end termination at the start and end at the end poles of each line
2. Use C-RAIL-ANCHOR dead end termination at road crossings (at the nearest left and right side pole)
3. Use C-RAIL-ANCHOR dead end termination at the breaking point of the line, if breaking angle reaches or exceeds 10° .
4. Use C-RAIL-ANCHOR dead end termination at each pole of steep hills or slopes, if steepness reaches or exceeds 10° .
5. Use C-RAIL-ANCHOR dead end termination at the vertical breaking point of the line, if the breaking angle reaches or exceeds 10° .
6. Use C-RAIL-ANCHOR dead end termination at those poles of the line, where left and right side distance (to neighbouring poles) deviates from each other by more than 15%.

Addition: In case of extreme steep hills (steepness $> 15^\circ$) use the C-RAIL-HOOK-BASE-ADAPTER.

KIT CONTENT:

- 1) Anchoring frame
- 2) Wedge
- 3) Inset with sperical internal surface



- 1) Place the messenger (*C-RAIL-MESSENGER*) into the frame as picture shows. For easy and comfortable setting, twist the messenger left or right by app 60° while you are moving it down.

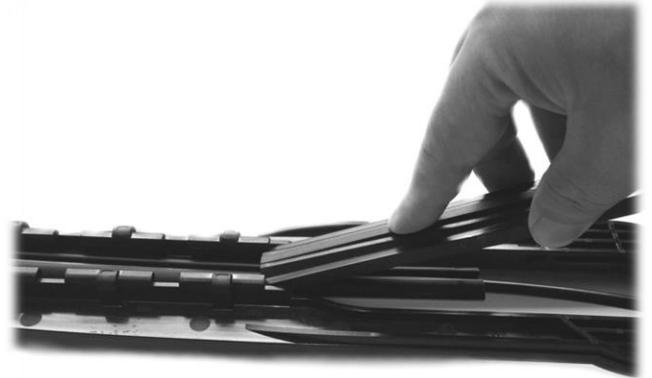
Make sure that messenger over length in the frame is min 6 cm.

For creating optimal installation circumstances, do not remove the cable from the C-RAIL-MESSENGER. If it becomes (removing of cable) necessary -due to some local special requests- (excess length creation at special place etc.) the C-RAIL-MESSENGER installation into the frame remains unchanged as following installation steps show.



- 2) Position the C-RAIL-MESSENGER precisely into the frame (*riven part faces upward*) make sure that over length reaches the minimum length.

Slide the wedge into the gap between the top of the C-RAIL-MESSENGER and the dead-end frame. Push it forcibly into the frame while ensuring that C-RAIL-MESSENGER remains in place and does not move backwards together with the wedge.

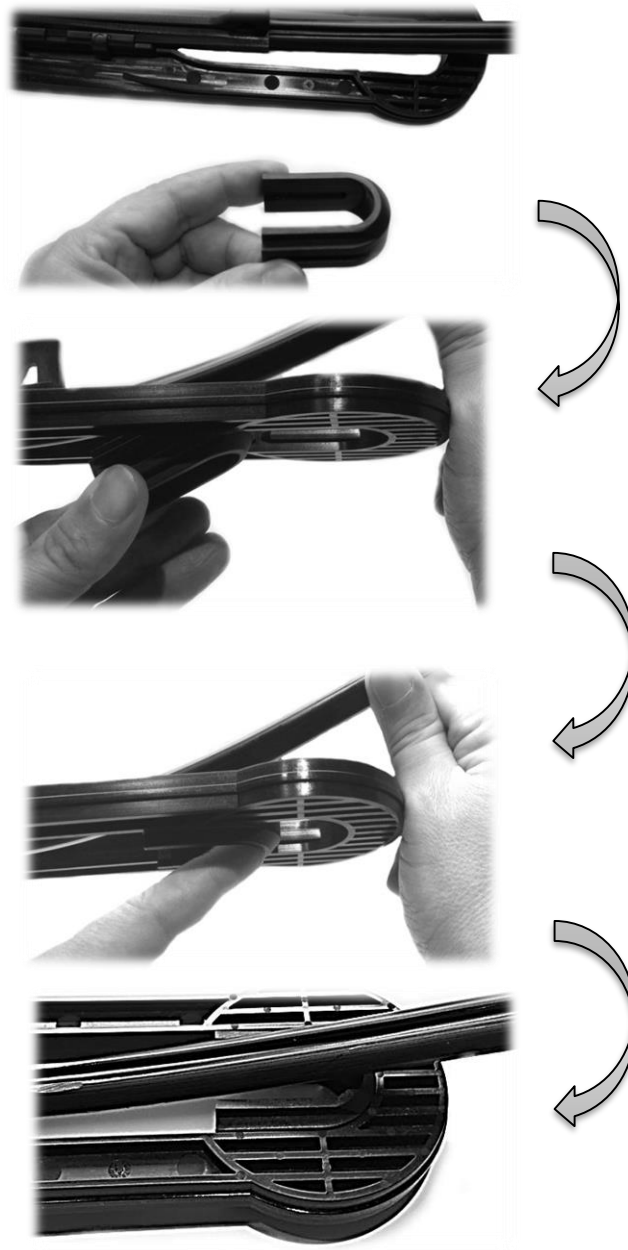


Move the wedge until it reaches the indicators on the sides of the frame as picture shows. If the wedge reaches this position it will always move together with the C-RAIL-MESSENGER into the frame and will not allow C-RAIL-MESSENGER to slip out while real strengths are being applied on it during installation.



- 3) Squeeze the “U” form inset gently, then place in and slide over the internal side bones of the frame. Push it along its way till it locks itself at the final position.

If necessary, bend up the pre-installed messenger for comfortable insertion of the “U” form piece.



For hanging C-RAIL-ANCHOR dead-end frame on poles – a product specific pole hook must be used. (C-RAIL-HOOK-A)