CLIC TOP-T

1. Product Description

The rational and efficient assembly system for cables and pipes especially for tunnel applications. Available in 15mm, 25mm, 28mm, 36mm, 40mm and 47mm diameters, especially for radiator cables in ½", ⅞",1¼", 1⅝" dimensions.

- Fastening of radiator cables in road and railway tunnels.
- Installation technology in damp rooms
- Electrical installation of all types indoors

2. Features

- One-piece, self-closing plastic pipe clamp
- Tool-free system
- Very high dynamic load capacity
- Minimal moisture absorption (also suitable for damp rooms)
- Resistant to road salt and exhaust fumes
- Wide application temperature range from -40 °C to +110 °C
- Installation with metric or wood screws
- 100% manufactured in Switzerland

3. Material Data

Material quality	PA 66 UV & heat stabilized.
Density at +20 °C	1.10 g/cm3
Tensile strength	> 40 MPa
Elongation at break	> 25%
Tensile modulus of elasticity	> 1740 MPa
Water absorption 23 °C	1.2% (ISO62)
Climatic resistance	-40 °C to +110 °C
Max. service temp. continuous	+90 °C
Flammability	HB according to UL 94
Halogen	free according to IEC 754-2
UV	f1 (outdoor acc. UL 746c)
Colour	black (RAL 9011)

4. Chemical Resistance

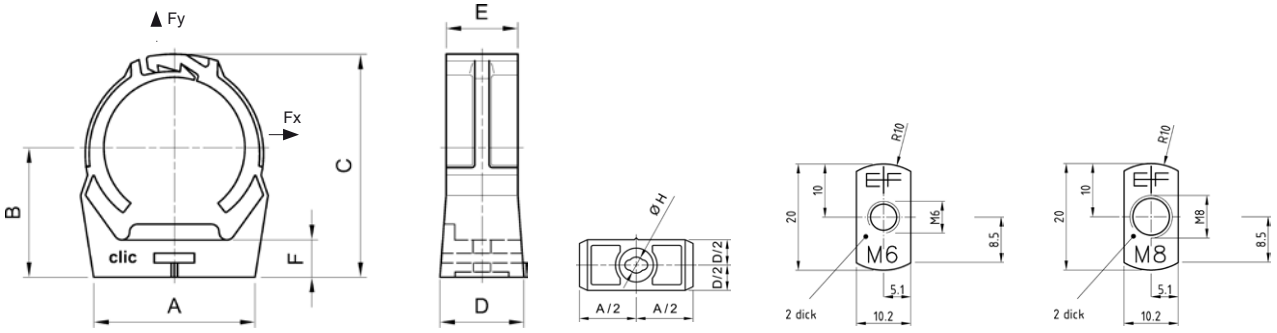
Petrol, diesel and oil	resistant
Lubricants	resistant
Ketones	resistant
Aldehydes	resistant
Hydrolysis	resistant
Saline solutions	resistant
Acids in aqueous solution	resistant
Bases in aqueous solution	resistant

5. Technical Data

Type	Clamping range		A	B	C	D	E	F	Fixing Screws		Rec. Load [N]		weight	heat value
	min.	max.	mm	mm	mm	mm	mm	mm	Ø [mm]*		Fy**	Fx**	gr.	MJ
15	14.3	16.8	20.6	20.2	31.5	17.1	14.5	7.5	3.5	M6	300	300	4.73	0.16
25	24.8	27.8	30.4	26.0	44.2	20.0	17.0	8.8	4.5	M6	300	300	8.82	0.29
28	27.8	31.2	33.4	28.6	48.3	20.2	17.0	8.8	4.5	M6	300	300	10.35	0.34
36	35.5	39.5	41.8	33.4	57.9	21.0	18.0	9.1	4.5	M6 / M8	300	300	14.83	0.49
40	39.5	43.5	46.2	35.5	62.3	21.0	18.6	9.4	4.5	M6 / M8	300	300	17.07	0.56
47	46.5	50.5	53.5	40.3	71.2	22.0	19.5	9.8	4.5	M6 / M8	300	300	22.95	0.76

* Screw diameter; wood screw

** At +20 °C, safety factor > 3 taken into account



Bottom view CLIC M6 Sliding Nut CLIC M8 Sliding Nut

6. High Cycle Fatigue

CLIC-TOP-T is qualified for use in railway tunnels for high-speed traffic up to 250 km/h in combination with radiating cables.
The load is applied to the bracket via the radiating cable, with a bracket spacing of 1m and a wall spacing of 80mm.
Guaranteed load cycles: 3mio cycles
Alternating load **cylcle**: +/- 110N (this covers the critical case when the cable is laid transversely to the tunnel axis)

Calculation and testing laboratory: EMPA (Swiss Federal Laboratories for Materials Testing and Research).

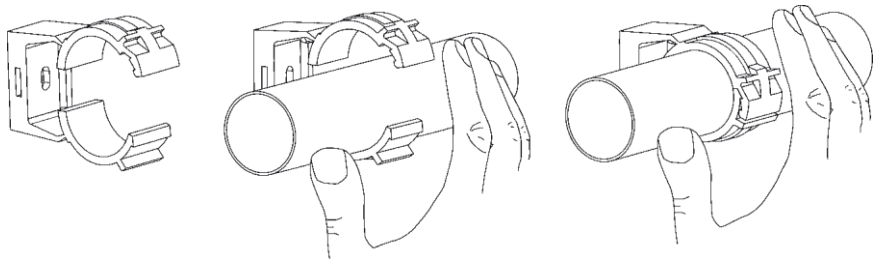
7. Conformity

REACH, RoHS

8. Safety Data Sheet

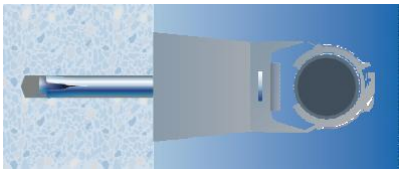
Not appicable

9. Installation/Assembly

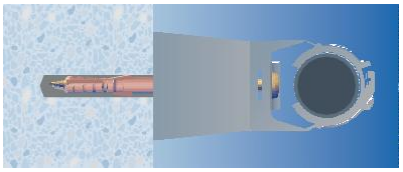


Mount the pipe clamp, insert the pipe, snap the CLIC into place with slight pressure.
Open: Press on the CLIC lock with a screwdriver blade.

Examples of concrete base

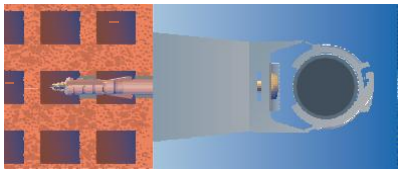


CLIC clamp,
CLIC spacer,
TILCA metall anchor,
CLIC sliding Nut



CLIC clamp
Wood sccrew
CLIC spacer
DELTA nylon dowel

Examples for masonry base



CLIC clamp,
wood screw
CLIC spacer
DELTA nylon dowel

10. Manufacturer/Brand

EFCO Befestigungstechnik AG
Grabenstrasse 1 · 8606 Nänikon · Schweiz

CLIC is a registered international trademark of EFCO and is 100% produced in Switzerland

11. Accessories

Further accessories for distance mounting, multiple fastenings etc. can be found on the CLIC-Website.

12. Links/Downloads

For more information, see:

EFCO-Website/EFCO-Shop http://www.efco.swiss
CLIC-Website http://www.clic-original.com

The information is based on our current technical knowledge and is intended as a guide. The chemical resistance must be clarified in individual cases on the basis of your own tests.

For further technical information, please contact EFCO