

# Technical data sheet clic<sup>®</sup>t<sup>®</sup>op 63 – 127 mm

## 1. Manufacturer

Egli, Fischer & Co. Ltd.  
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 P.O. Box  
 8022 Zurich  
 Switzerland

## 2. Product description

One-piece, self locking plastic pipe clamp for the exterior and indoor area

## 3. Application areas

- Plumbing trade
- Chemical industry
- Electrical installations (tubular cable protection)
- Sanitary installation
- Swimming pools

## 4. Features

- Locking system without additional screws
- Very high dynamic load
- Very high stress corrosion crack stability
- Very low moisture absorption
- Chloride- and weather resistant
- Clamping range 63 – 127 mm (2,48" to 5")
- Mounting with metrical or wood screws
- Approved by: KIWA<sup>®</sup>, UL<sup>®</sup> and IAPMO R&T/UPC<sup>®</sup>

## 5. Technical data

Material quality	Polyamide PA 12
Density at +20 °C	1,01 g/cm <sup>3</sup>
Elongation at yield	12 %
E-Modulus in tension	1100 MPa
Water absorption at 23 °C	1,50 %
Moisture absorbtion (23 °C / 50 % r.F.)	0,50 %
Shore hardness D	70
Disruptive strength	32 kV/mm
Weather proof	-40 °C up to +110 °C
Mounting temperature	down to -25 °C
Maximum service temperature short term	+150 °C
Maximum service temperature long term	+90 to +110 °C
Flammability	HB according to UL 94
Calorific / energy value	34 kJ / gram
Impact value (Charpy, +23 °C)	7
Impact value (Charpy, -30 °C)	6
Halogen	halogen free as per IEC 754-2
Petrol, diesel, oil	resistant
Corrosion	resistant
Chloride salt	resistant
UV	resistant ISO 4892-2
Standard colours	dark grey (RAL 7001)
Special colours	on request

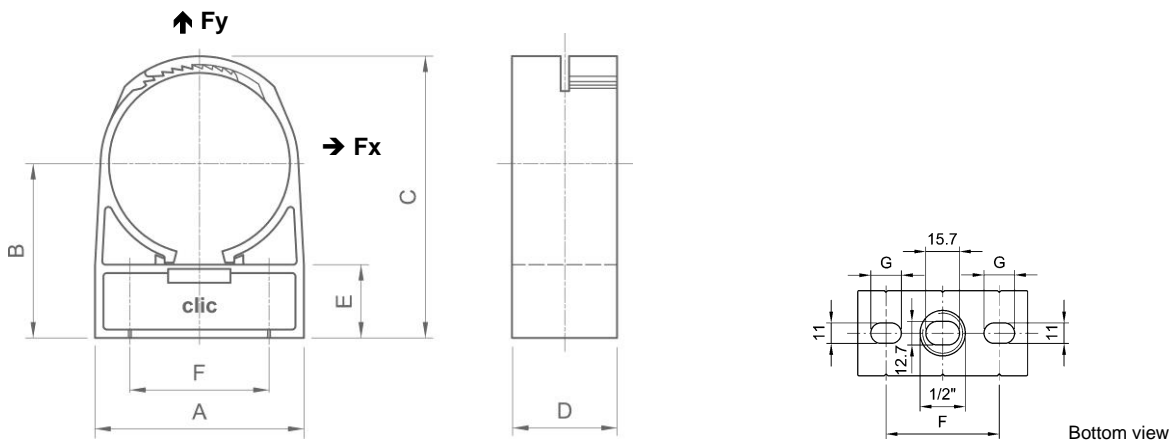
## 6. Product data

### 6.1 Product choice

Type	Steel		Copper	Cast iron	PE	PVC	Cable ducts metric measures	Coaxial cable	Certification		Breaking load [N]	
	mm	inch	mm	mm	mm	mm		inch	UPC	UL	Fy*	Fx*
63					63		63		✓	✓	1800	1000
71	76,1	2 1/2"	76	78	75	75			✓	✓	2200	1300
80	88,9	3"	89						✓	✓	2600	1600
90					90				✓	✓	3000	1900
101			108	110	110	110			✓	✓	3500	2200
113	114,3	4"	114		125	125			✓	✓	4000	2500

\* with 2 screws DIN 571 at +20 °C, safety factor must be considered!

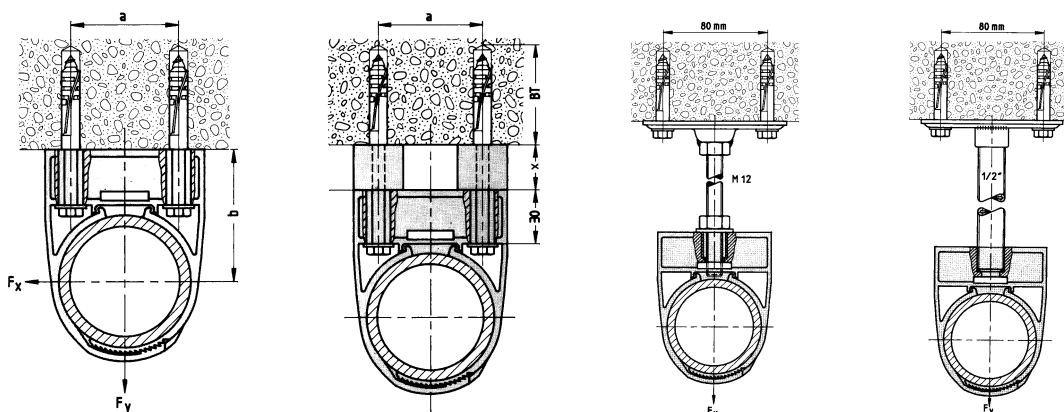
### 6.2 Technical information



Type	Clamping range [mm]		A [mm]	B [mm]	C [mm]	D [mm]	E [mm]	F [mm]	G [mm]	Breaking load [N]	
	min.	max.								Fy*	Fx*
63	63	71	78	72	115	40	31	52	11	1800	1000
71	71	80	87	77	124	40	31	58	15	2200	1300
80	80	90	98	83	136	40	31	66	16	2600	1600
90	90	101	110	89	148	40	31	76	16	3000	1900
101	101	113	124	96	163	40	31	86	17	3500	2200
113	113	127	139	105	180	40	31	102	17	4000	2500

\* with 2 screws  $\varnothing$  8 mm DIN 571 at +20 °C, safety factor must be considered!

### 6.3 Mounting examples



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## 6.4 Accessories



**DELTA nylon plug**



**Hexagonal wood screw**



**Base plate**



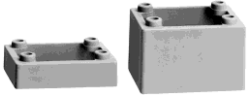
**Steel tube with o.d. threading**



**Steel bar with metric threading**



**TILCA Anchor bolt**



**CLIC spacers**



**CLIC flange**

## 7. Chemical resistance

Material	Concentration	Resistance at +23 °C		Material	Concentration	Resistance at +23 °C
Acetic acid		●●		Milk		●●●
Acetone		●●●		Mineral oil		●●●
Acetylene		●●●		Naphthaline		●●●
Aluminium salts	aqueous	●●●		Nitric acid		○
Ammonia	aqueous	●●●		Nitrobenzene		●●
Amylacetate		●●		Oils		●●●
Aniline		●●●		Oleic acid		●●●
Antifreeze		●●●		Oleum		○
Benzene		●●●		Oxalic acid		●●●
Benzine		●●●		Oxygen		●●●
Benzyl alcohol		●		Ozone		●
Bromine		●		Paraffin oil		●●●
Butane		●●●		Perchlorethylene		●●●
Butanol		●●●		Petroleum		●●●
Carbon tetrachloride		●●		Petroleum ether		●●●
Caustic potash	10%	●●●		Phenol		●
Caustic potash	50%	●●●		Potash		●●●
Chlorobenzene		●		Propane		●●●
Chlorine		○		Pyridine		●●●
Chloroform		●		Salicylic acid		●●●
Citric acid		●●		Sea water		●●●
Copper sulphate		●●●		Silicon oils		●●●
Cresol		○		Soap suds		●●●
Decalin		●●●		Soda	10%	●●●
Eatible fat		●●●		Soda	50%	●●●
Engine oil		●●●		Sodium chloride	saturated	●●●
Ethanol		●●●		Sodium hydroxide	10%	●●●
Ether		●●●		Sodium hydroxide	50%	●●●
Ethyl acetate		●●●		Sodium silicate		●●●
Ethylene oxide		●●●		Sodium sulphate	concentrated	●●●
Fats		●●●		Starch		●●●
Fluorine gas		●		Stearic acid		●●●
Formaldehyde		●●		Stearin		●●●
Formic acid	concentrated	●		Styrene		●●●
Frigen	liquid F12	●●●		Sulphur dioxide		●●
Frigen	liquid F22	●		Sulphuric acid	10%	●●
Fuel		●●●		Sulphuric acid	concentrated	●
Glycerine		●●●		Table salt		●●●
Glycol		●●●		Tallow		●●●
Heating oil		●●●		Tartaric acid		●●●
Heptane		●●●		Tetralin		●●●
Hydraulic oil		●●●		Toluene		●●●
Hydrochloric acid	1%	●●		Transformer oil		●●●
Hydrochloric acid	10%	●		Trichlorethane		●●
Hydrogen peroxide	20%	●●		Trichlorethylene		●●
Hydrosulphide		●●●		Turpentine		●●●
Iodine tincture		○		Urea		●●●
Iso-octane		●●●		Uric acid		●●●
Isopropanol		●●●		Urine		●●●
Kaliumpermanganat		○		Vaseline		●●●
Kerosene		●●●		Vinegar		●●●
Lactic acid		●●		Water		●●●
Magnesium chloride	10%	●●●		Wax		●●●
Mercury		●●●		Xylene		●●●
Methane		●●●		Zinc chloride	aqueous	●●●
Methanol		●●				
Methylene chloride		●				

●●● resistant - ●● limited resistance - ● not resistant - ○ soluble, greatly affected

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**Chemical resistance**

In general, polyamide 12 is resistant to many organic solvents and alkalis. Grilamid is also unaffected by petroleum fractions, oils and fats.

Concentrated acids cause relatively rapid hydrolytic degradation of all polyamides but PA 12 is resistant to dilute mineral acid and most organic acids.

The hydrolysis and environmental stress-cracking resistance of Grilamid are the most significant advantages of Grilamid in comparison to other engineering plastics.

PA 12 has a distinctly higher hydrolysis resistance than PA6 and PA66. The matrix is less hydrophilic, absorbs less water, even at elevated temperatures and, therefore, is less affected by hydrolysis.

The recommendations and data given are based on our experience to date. No liability can be assumed in connection with their usage and processing.

**For technical advice please contact our sales engineers. We will be happy to provide further assistance.**

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