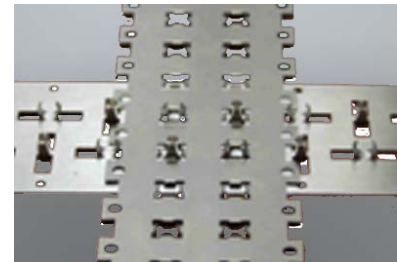


Datasheet Flamingo

METAKLETT is a multiply mountable and dismountable metallic hook and loop fastener that can be applied in environments where synthetic materials lose their practicality. The snap-action device consisting of the hook-element "HF1" and the complement "LF1" stands out due to its straightforward manual assembling and disassembling features.



Material

Hook "HF1":	1.4310
Complement "LF1":	1.4310
Sheet thickness t:	0.2 mm
Sheet width b:	30 mm
Total height assembled:	3 mm
Sheet length l:	can be cut to variable length
Properties:	1.4310 according to DIN 10088 corrosion and acid resistant chromium nickel steel austenitic, high weldability.

Application values

Test set-up

The angle of the load direction during the dismounting process is adjustable.

peel tension	pull-out tension	shear tension			
	90°	60°	45°	30°	0°

The data below shows the maximum force per area as function of the different types of load* and temperatures**.

1) Maximum force per area for different types of load and at different temperatures**.

Clamp	N/cm ²						
	23 °C	50 °C	100 °C	200 °C	400 °C	600 °C	800 °C
Pull-out strenght	7	7	7	8	-	-	-
Shear strength 0°	35	29	28	33	49	32	16
Shear strength 30°	12	8	8	9	-	-	-
Shear strength 45°	11	8	8	9	-	-	-
Shear strength 60°	10	8	7	8	-	-	-
Peel strength	3	3	3	3	-	-	-

2) Maximum force per hook for different clamps* and at different temperatures**.

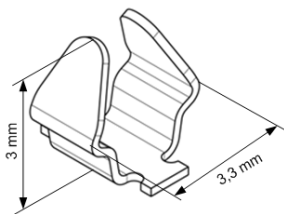
Clamp	N/hook						
	23 °C	50 °C	100 °C	200 °C	400 °C	600 °C	800 °C
Pull-out strenght	12	12	12	14	-	-	-
Shear strength 0°	60	49	48	56	83	54	27
Shear strength 30°	20	14	14	15	-	-	-
Shear strength 45°	19	14	14	15	-	-	-
Shear strength 60°	17	14	12	14	-	-	-
Peel strenght	5	5	5	5	-	-	-

A minimum of four hooks have to be used for the joint. There are 6 hooks (and complements) on an area of 10.2 cm².

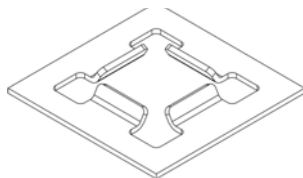
*: Test specification: LWF KS-2-specimen, Laboratory for Materials and Joining Technology, University of Paderborn

** : Because of the testing device only verification in shear direction is possible

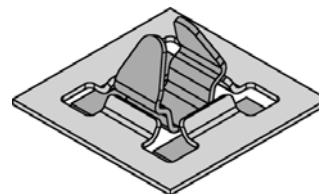
Geometrical definition



Hook "HF1"

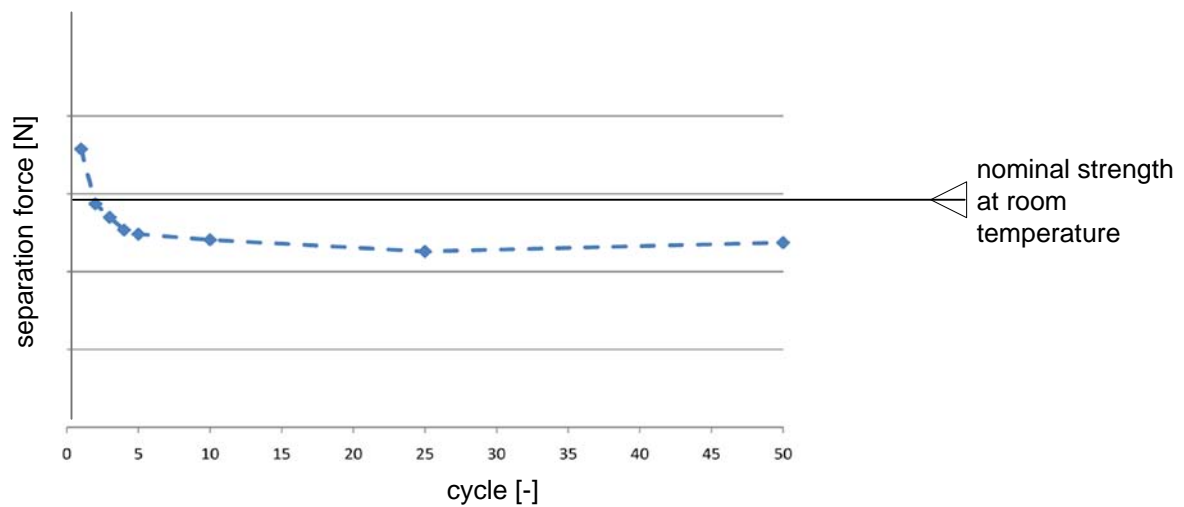


Complement "LF1"



Mounting-dismounting-behavior

Trend of separation force per hook for multiple fastening



*Decrease of joint strength for manually mounting and dismounting fifty times,
Averages of 3 tests at 23 °C room temperature with trendline*

The decrease of strength after disassembling one hundred times averages out at ca. 35 %.

Chemical and thermal resistance

Accordingly to DIN 10088, material 1.4310

Fastening

Preferably by welding or rivetting

Further possibilities according to application; decision by customer