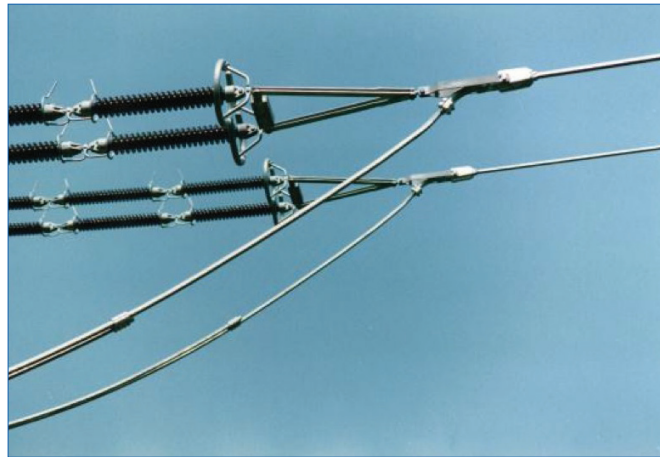


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General

Parallel groove clamps provide **electrical connection** between two conductors, and mainly used in jumper loops with wedge type suspension clamps.

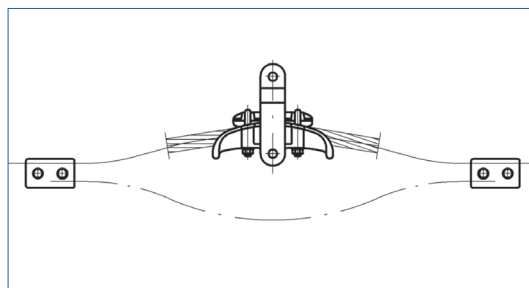


Loop guidance of a tension string

Other applications include branch connection in substations, and ground wire earth continuity connections.

Parallel groove clamps are also used in security loops of suspension strings, where sufficient conductor stabilisation force is required.

For safety reasons, it is recommended to mount at least two clamps for one loop.

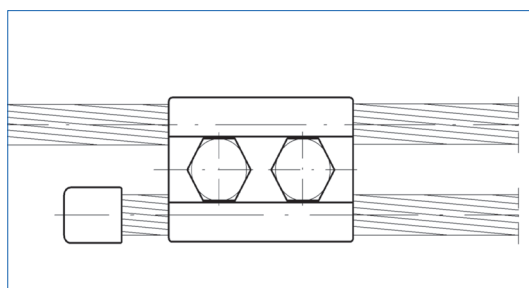


Security loop for a suspension string

Special types are required for vibration damping loops of **Brettelle dampers**.

The grooves of parallel groove clamps made of aluminium and designed for low electrical joint resistance and power transmission between conductors.

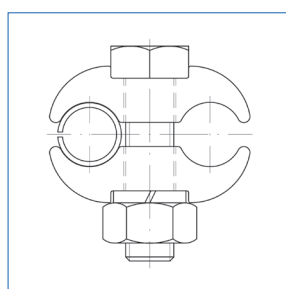
The connection faces have specialised texture surfaces to establish better electrical and mechanical connection.



Parallel groove clamp with a dead end cap

Forged clamps have smooth outer profiles that are particularly suited to higher voltage fields where good corona discharge performance is required.

Projecting ends of conductors can be protected using end caps to maintain high performance.



Parallel groove clamp with a reducing tube

Parallel groove clamps can be also be manufactured from extruded aluminium alloy, and particularly suited to earth wire applications. For power connections, this type is suitable for voltages $\leq 132\text{kV}$.

Clamps can also be provided with grooves of different sizes, with a range of reducing tubes in aluminium and bimetallic material on request (connecting Copper to Aluminium cable).

Parallel groove clamps with spacers are obtainable for all bundle configurations.

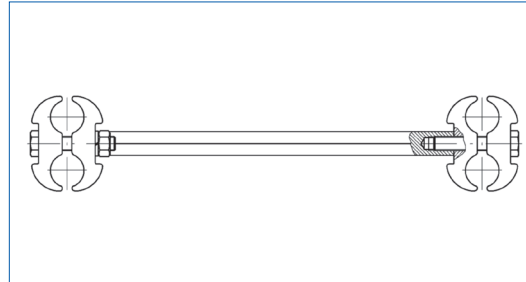
This is advantageous at using wedge clamps for conductor tensioning.

6

PARALLEL GROOVE CLAMPS

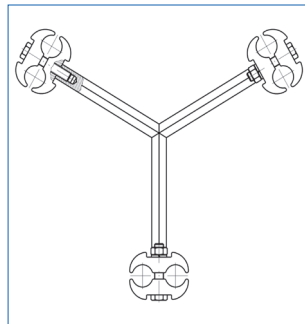
Jumper spacers

Parallel groove clamps will also be used for spacing **bundle conductors**, when wedge type tension clamps are used to fix the conductors.



Jumper spacers for twin bundles

Various types for all conductor configurations are available upon request.

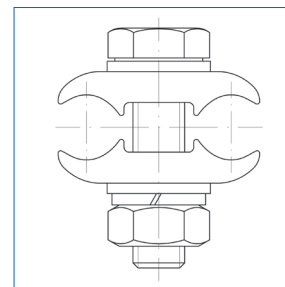


Jumper spacers for triple bundles (left) and four bundles (right)

Parallel groove clamps for **copper conductors** can be delivered in a forged and cast design.

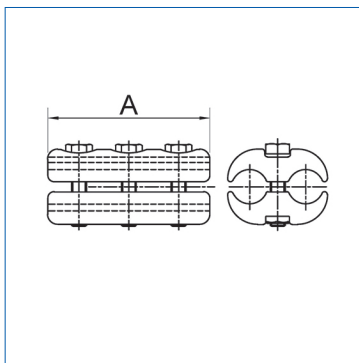
All clamps have are manufactured in high corrosion resistance materials, compatible with the conductors.

Clamping screws can be supplied in stainless steel or hot dip galvanized steel.



Parallel groove clamp for copper conductors

Parallel groove clamp with serrated grooves, forged for aluminium based conductors



material: aluminium, forged; steel, hot dip galvanized

L.-Nr.:	dimensions in mm		screws	kg
	cond.Ø	A		
1PA100-020	9,0 - 9,9	70	2	0,28
1PA100-050	12,3 - 12,5	65	2	0,25
1PA100-070	12,6 - 14,9	90	3	0,36
1PA100-100	15,0 - 17,1	90	3	0,40
1PA100-140	17,2 - 19,0	100	3	0,42
1PA100-160	19,1 - 21,0	100	3	0,60
1PA100-200	21,1 - 23,4	120	3	0,83
1PA100-230	23,5 - 25,7	120	3	0,80
1PA100-260	25,8 - 27,8	130	3	0,90
1PA100-310	27,9 - 29,9	130	3	0,80
1PA100-350	30,0 - 31,9	140	3	1,20
1PA100-360	32,0 - 33,4	140	3	1,39
1PA100-460	33,0 - 36,2	180	4	2,50
1PA100-480	36,0 - 39,0	220	5	3,40

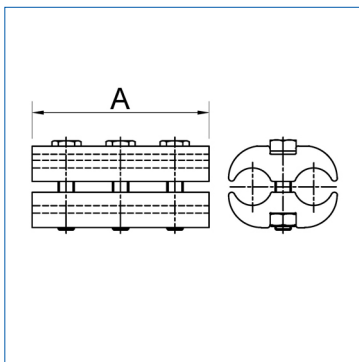
Parallel groove clamps with **reducing and bimetallic** are available upon request.

Clamps with screws made of hot-dip-galvanized steel grade 8.8 as well as copper clamps can also be supplied.

If parallel groove clamps are used for **Bretelle dampers**, the installation distances can be calculated.

Parallel groove clamps with spacers are available for all bundle configurations upon request.

Parallel groove clamp for earthwires and phase tension up to 132 kV for aluminium based conductors



material: aluminium, extruded; steel, hot dip galvanized

L.-Nr.	dimensions in mm			kg
	cond.Ø	A	screws	
4502.11	8,1 - 11,7	80	3	0,25
4502.12	11,8 - 15,8	95	3	0,41
4502.13	15,9 - 19,2	100	3	0,50
4502.14	19,3 - 24,8	110	3	0,80

These types can be used for nominal voltages up to 132 kV and can also be delivered with one or two screws.

Parallel groove clamps with reducing sleeves or aluminium-copper-sleeves are available upon request.

Other types are available upon request.

Parallel groove clamp

for steel and copper conductors

material: steel, hot dip galvanized

L.-Nr.	dimensions in mm			kg
	cond.Ø	A	screws	
4503.10	5,1 - 8,1	60	2	0,36
4503.11	8,2 - 11,6	65	2	0,43
4503.12	11,7 - 15,7	65	2	0,74

Parallel groove clamps with one or three screws are available upon request.

Other types are available upon request.

