

# Factory Automation

Our range of secondary welding cables is designed for the industrial operation for robot and manual welding guns with external transformer and for the power supply in mechanical engineering.

## LEONI Secondary Welding Cables

### JUMPER and KICKLESS Cables

Single pole jumpers are available in both air or water cooled version.

Cables are protected by either a rubber or polyurethane jacket.

Polyurethane is an excellent electrical and thermal insulator. Other advantages include its self-extinguishing quality plus excellent resistance: to abrasion, welding sparks, weak acids & basic solutions.

#### Technical characteristics

- The fine stranded copper wires are made of high grade electrolytic copper and are structured and positioned to increase flexibility and to reduce abrasion factors.
- The copper strands are crimped to the lugs ensuring the best electrical contact without altering or overheating the copper.
- Different standards of lugs are already available, new types can be developed according to customers specification.
- The rubber and polyurethane jackets are crimped onto the lugs with a protective steel ring, which ensures the water tightness of the jumper.
- Concerning the kickless cable, a perforated inner sheathing provides interior insulation and contains the inner cores. The patented system significantly reduces abrasion and minimizes the generation of wire fragments which can cause water-cooling restrictions.
- The polarity construction of the kickless cable can be:
  - Opposite: Recognized by mechanical resistant on heavy duty applications.
  - Alternate: Recommended when high output is required due to lower impedance and for manual station due to lower reactance.



3 – 4 times higher lifetime than standard cables

# LEONI

Factory Automation

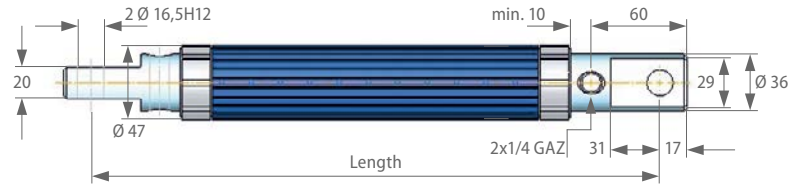
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# LEONI Secondary Welding Cables

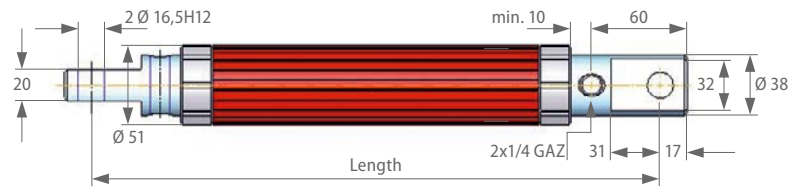
## KICKLESS Cable

(Bipolar secondary welding cable)

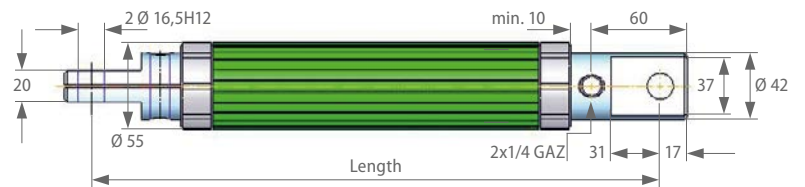
Nominal cross section 160 mm<sup>2</sup>



Nominal cross section 200 mm<sup>2</sup>



Nominal cross section 250 mm<sup>2</sup>



### Article No. (Example)

Kickless Cable Family	Nominal cross section in mm <sup>2</sup>	Lugs/combination Additional lugs on request	Length in mm	GTP: Polyurethane external jacket
				P: Rubber external jacket
				GTA: Polyurethane external jacket alternate polarities
				PA: Alternate polarities rubber external jacket
1	160	XX	2500	GTP/P

Nominal cross section	Material and colour	
	Polyurethane	Rubber
160 mm <sup>2</sup>	Blue	Black
200 mm <sup>2</sup>	Red	Black
250 mm <sup>2</sup>	Green	Black

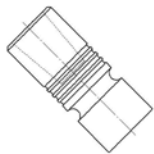
# Water-cooled JUMPER

(Single pole secondary welding cable)  
 Example of Jumpers, other versions possible



## Schematics

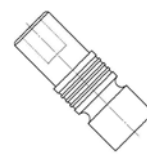
Conical lug female



45° bent lug



Cylindrical lug



Conical lug male



90° bent lug



Flat lug



### Article No. (Example)

Water-cooled Jumper Cable Family	Nominal cross section in mm <sup>2</sup>	Lug/combination	Length in mm	C: Rubber external jacket P: Polyurethane external jacket
2	160	ZX XX (discriving a pair)	1600	C/P

Nominal cross section	Material and colour	
	Polyurethane	Rubber
160 mm <sup>2</sup>	Blue	Black
200 mm <sup>2</sup>	Green	Black
225 mm <sup>2</sup>	Green	Black
250 mm <sup>2</sup>	Green	Black
315 mm <sup>2</sup>	Blue	Black
400 mm <sup>2</sup>	Blue	Black
500 mm <sup>2</sup>	Red	Black
630 mm <sup>2</sup>	Red	Black

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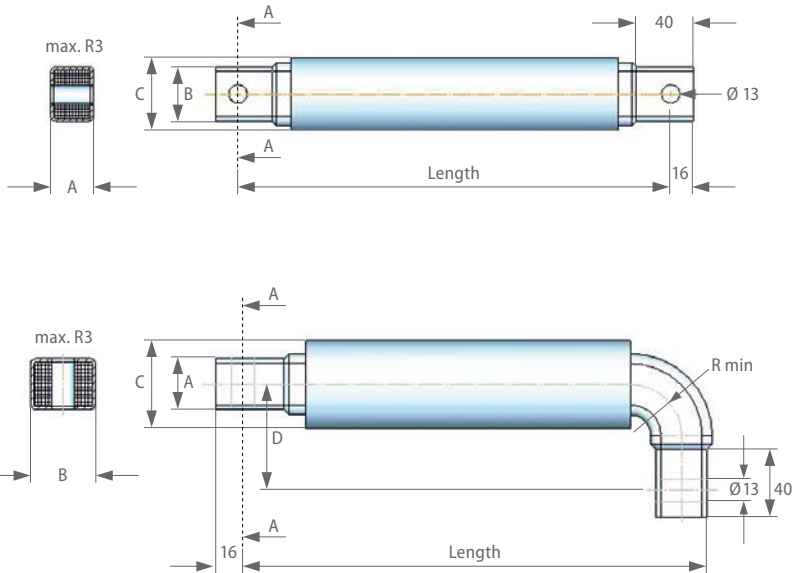
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# LEONI Secondary Welding Cables

## Air-cooled JUMPER

(Single pole secondary welding cable)



### Article No. (Example)

Air-cooled Jumper Cable Family	Nominal cross section in mm <sup>2</sup>	Air-cooled Jumper	Length in mm	D: Straight C: 90° bent
3	315	TNR	0400	D/C

Nominal cross section	Material			
	A	B	C	D
315 mm <sup>2</sup>	15	32	40	40
400 mm <sup>2</sup>	20	32	45	45
500 mm <sup>2</sup>	24	32	45	45
630 mm <sup>2</sup>	24	38	50	
800 mm <sup>2</sup>	30	38	55	

Notice:  
The external sheathing for air cooled jumpers is only made of black rubber. Silicone free.

Unless otherwise agreed our general conditions of sale and delivery shall apply.