

# POWERDUCTION Induction Heating Catalog



Explore Induction Systems from  
Innovative Solutions CRTE and GYS

See our full range of powerful, high-performance

SCAN TO VISIT:   
FULL GYS INDUCTION PRODUCT RANGE



RELEASING - SHRINK-FITTING - STRIPPING - STRAIGHTENING - DENTREMOVAL - BENDING - BRAZING



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# WHAT IS INDUCTION ?

*Induction is a highly efficient process for heating metal at its core in an extremely short space of time. Ideal for use in mechanical engineering, vehicle body repair, or general maintenance, this precise and speed heat transfer method only affects metal elements and therefore has no impact on rubber or plastics. The process is completely localised, and as there is no gas or flames involved, it is a significantly safer solution for the workplace.*

## THE EFFECTS OF INDUCTION IN DIFFERENT MATERIALS

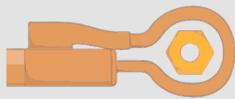
Induction has specific effects on different materials, which can help to differentiate them. For **ferromagnetic materials**, such as **steel, iron** and **cast iron**, a magnetic effect occurs: the **inductor is attracted to the workpiece**. The Curie point is reached (**the temperature at which the material loses its magnetisation**) when it turns cherry red.

	Material heat colouration	C°	F°
Shaping metal	Bright white	1200	2190
	Light yellow	1100	2010
	Yellow	1050	1920
	Light orange	980	1800
	Orange	930	1710
Bending	Light red	870	1600
	Orange -red	810	1490
	Light cherry red	760	1400
	Cherry red	700	1290
Releasing	Dark cherry red	650	1200
	Reddish brown	540	1000

\* This gradient applies specifically to ferromagnetic materials.

On the other hand, for **non-magnetic materials** such as **copper, aluminium, and zinc**, the material will be repelled. **These materials require a more powerful power source** because they require **more time to get hot**. This repulsion can make it more difficult to hold the inductor in place when using it by hand.

## THE DIFFERENT APPLICATIONS FOR INDUCTION



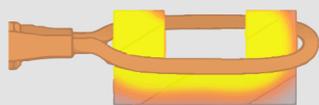
### Releasing:

Frees, loosens or unblocks mechanical components that are jammed, locked or difficult to manipulate due to corrosion, wear or other factors.



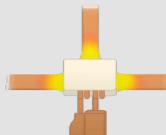
### Straightening / Dent removal :

This involves reshaping a part that has been deformed, twisted or bent. To restore it to its original state without it losing its mechanical properties and becoming brittle.



### Shrinking :

Shrink-fitting is the assembly of two components by means of a press fit. The outer part is called a hoop and the inner part is called a shrink fitting.



### Brazing :

Metal brazing is a permanent assembly process that establishes a metallic bond between the parts being joined. Unlike welding, there is no fusion of the joined edges.

# FLAME VS INDUCTION

## THE DIFFERENCE BETWEEN FLAME AND INDUCTION

Induction offers many advantages over flame in terms of efficiency, precision, safety, environmental impact, and running costs. In many different industries, induction heating is replacing the traditional blowtorch.

	Flame	Induction
Efficiency	<p>✗</p> <p>Heats directly on the surface, wasting energy because the heat is not localised.</p>	<p>✓</p> <p>15X more effective than the flame. Direct, localised heating of the material, faster temperature rise.</p>
Accuracy	<p>✗</p> <p>Heating temperature is difficult to control precisely, risk of overheating, and damaging.</p>	<p>✓</p> <p>Precise, localised heating system, delivering uniform heat transfer.</p>
Safety	<p>✗</p> <p>A fire permit is required for use, as an open flame can quickly lead to a fire hazard.</p>	<p>✓</p> <p>No accreditation required for induction, no flames, no release of harmful gases.</p>
Environment	<p>✗</p> <p>The combustion of gas produces CO2 emissions.</p>	<p>✓</p> <p>Reduced fossil fuel consumption.</p>
Profitability / Costs	<p>✗</p> <p>Cost of purchasing gas cylinders. Cost of qualified personnel.</p>	<p>✓</p> <p>Speed of installation and durability, low maintenance.</p>



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# Standard inductors

- **Fixed Ferrite inductors**

Small inductors S180; S90; S70



Large inductors L180; L90; L70



- **inducteurs Ferrite interchangeable**

Small inductors S20/B1; S180/B1; S180/B3W; S180/B6



Complete inductors C20/B1; C180/B1



Large inductors L180/B4; L20/B4



# Specialist inductors

- **Small Ring**



- **Large Ring**



- **HeatTube / PreHeat**



- **Alu glove; Spiral L180; L180 Planage**



- **Brazing**



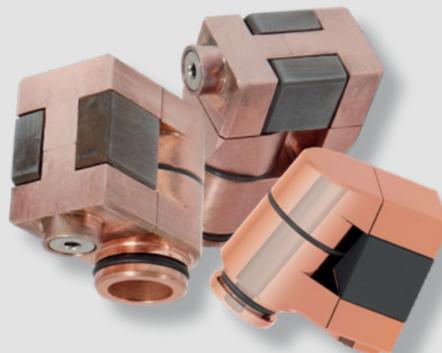
- **Spiral**



# FIXED FERRITE INDUCTORS

## SMALL

	<b>S90</b> ↕ 38x20x 35 058927	<b>S180</b> ↕ 38x20x 44 059269	<b>S70</b> ↕ 38x20x 40 061569
* = supplied as standard	□ *		□
<b>37 LG</b>			
<b>39 &amp; 50 LG</b>		□ with <b>28S</b> adapter	
<b>110,160 &amp; 220 LG</b>		□ with <b>32S</b> adapter	



ADAPTORS	
	<b>28S</b> M28 Ø16 Ø 18 x 155 064485
	<b>32S</b> M32 Ø16 Ø 18 x 155 064508
<b>37 LG</b>	—
<b>39 &amp; 50 LG</b>	□ <b>28S</b> M28 Ø16
<b>110,160 &amp; 220 LG</b>	□ <b>32S</b> M32 Ø16



Small inductor data sheet.

### Sectors

-  Automotive workshops
-  HGV workshop
-  Maintenance

### Applications:

Small inductors are used to heat small parts, primarily in vehicle maintenance. Because of their small size, they can reach hard-to-reach places and their heating is highly localised.

Small inductors with a ferrite (concentrator) do not need to envelop a workpiece in order to heat it effectively.

### Application examples:



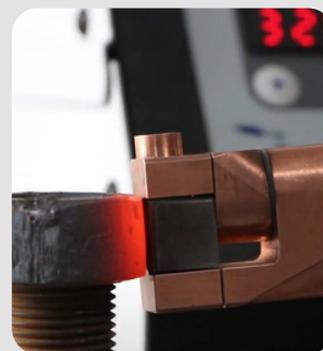
Releasing connecting rods:

- Small S90 inductor
- Powerduction 37LG



De-sealing an exhaust line assembly:

- Small S90 inductor
- Powerduction 37LG



Releasing a bolt:

- Small S180 inductor
- Powerduction 37LG

 * = supplied as standard	<b>L70</b> ↓ 81x31x 55 059771	<b>L180</b> ↓ 81x31x 66 059795	<b>L90</b> ↓ 81x31x 46 059788
<b>*37 LG</b>	—		
<b>39 &amp; 50 LG</b>	☐ with <b>28L</b> adaptor		
<b>110, 160 &amp; 220 LG</b>	☐ with <b>32L</b> adaptor	☑ with <b>32L</b> adaptor	
ADAPTORS			
	<b>28L</b> M28 Ø22 Ø 24 x 180 064492		
	<b>32L</b> M32 Ø22 Ø 24 x 180 064515		
<b>37 LG</b>	—		
<b>39 &amp; 50 LG</b>	☐ <b>28L</b> M28 Ø22		
<b>110, 160 &amp; 220 LG</b>	☐ <b>32L</b> M32 Ø22		



## Sectors

-  Industry
-  Maintenance
-  Agricultural workshops
-  HGV workshop

## Applications:

Large inductors are used in industrial and maintenance environments.  
For applications on damaged chassis, agricultural vehicles, etc.  
Large inductors need to be placed on a support point to avoid any risk of sparking.

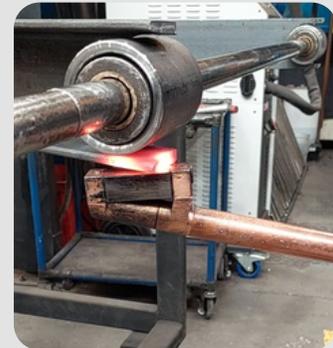
## Application examples :



**Straightening an HGV chassis:**  
- Large L90 inductor  
- Powerduction 220LG



**Agricultural maintenance:**  
- Large L180 inductor  
- Powerduction 220LG



**Fabrication of a trailer structure before it is welded:**  
- Large L70 inductor  
- Powerduction 220LG

# INTERCHANGEABLE FERRITE INDUCTORS SMALL/COMPLETE

	<b>S20/B1</b> ↓ 37 x 20 x 90 064874	<b>S180/B1</b> ↓ 37 x 44 x 65 064881	<b>S180/B3W</b> ↓ 33 x 29 x 90 067899	<b>S180/B6</b>  ↓ 102 x 32 x 21 087002
<b>37 LG</b>	□			
<b>39 &amp; 50 LG</b>	□ with <b>28S</b> adapter			
<b>110,160 &amp; 220 LG</b>	□ with <b>32S</b> adapter			

## FERRITE / FERRITE PROTECTION

			
<b>B1</b> 053823	<b>B1 (x5)</b> 079380	<b>B1</b> 056909	<b>B1 (x5)</b> 079397
		<b>B3</b> 067875	<b>B3</b> 072527

## DIFFICULT ACCESS ADAPTER

<b>90°-S</b> 082663		<input type="checkbox"/> compatible with <b>180/B1</b> <input type="checkbox"/> compatible with <b>180/B3W</b> <input type="checkbox"/> compatible with <b>180/B6</b>	<input type="checkbox"/> compatible with <b>S180 HEAT TUBE D37</b> <input type="checkbox"/> compatible with <b>S180 HEAT TUBE D40</b> <input type="checkbox"/> compatible with <b>S180 HEAT TUBE D50</b>
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## COMPLET (Ø 28)

	<b>C20/B1 (20°)</b> ↓ 37 x 13 x 250 056862	<b>C180/B1 (90°)</b> ↓ 37 x 39 x 235 056879
		
	□ *	□
<b>37 LG</b>		

\*= supplied as standard



### Sectors

-  Maintenance
-  HGV workshops
-  Automobile
-  Automotive workshops

### Applications :

Inductors are used for precision heating, or where space is at a premium. Fitted with interchangeable ferrites (concentrators), they can be used to heat industrial materials, or for releasing seized parts, etc.

### Application examples:



Releasing seized brake discs:  
- Small S20/B1 inductor  
- Powerduction 50LG



Wheel nut removal:  
- S180/B3W inductor



Loosening steering tie rods:  
- Small S20/B1 inductor

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# INTERCHANGEABLE FERRITE INDUCTORS LARGE INDUCTORS

	L180/B4 ↕ 124x84 x 56 079786	L20/B4 ↕ 120x57 x 26 067882
37 LG	—	
39 & 50 LG	□ with 28L adaptor	
110, 160 & 220 LG	□ with 32L adaptor	
FERRITE / FERRITE PROTECTION		
		
<b>B4</b> 053755	<b>B4</b> 054844	



Large inductors data sheet.

## Sectors

-  Agricultural workshops
-  Maintenance
-  HGV workshop
-  Industry

## Applications:

Large inductors with interchangeable ferrites (concentrators) are ideal for straightening welded assemblies. They are used for applications in a variety of different sectors, but are regularly used in agricultural maintenance for straightening bucket teeth that may be bent, bulk heating, shrinking etc.

## Application examples:



Straightening bucket teeth:

- Large L20B4 inductor
- Powerduction 220LG



Straightening on stainless steel framework:

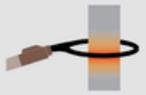
- Large L20B4 inductor



Heating on steel:

- Large L20B4 inductor

# SPECIAL INDUCTORS SMALL RINGS

				
∅ Diameter of workpiece to be heated (in mm)	∅ Diameter of the suitable ring inductor (in mm)	∠20°	∠90°	∠180°
16 < d < 18	∅ 20	S20/D20 078796	S90/D20 078871	S180/D20 069985
20 < d < 23	∅ 25	S20/D25 078802	S90/D25 078888	S180/D25 069992
24 < d < 28	∅ 30	S20/D30 078819	S90/D30 078895	S180/D30 070592
28 < d < 33	∅ 35	S20/D35 078826	S90/D35 078901	S180/D35 070608
32 < d < 38	∅ 40	S20/D40 078833	S90/D40 078918	S180/D40 070615
36 < d < 43	∅ 45	S20/D45 078840	S90/D45 078925	S180/D45 070622
40 < d < 48	∅ 50	S20/D50 078857	S90/D50 078932	S180/D50 070639
44 < d < 53	∅ 55	S20/D55 078864	S90/D55 078949	S180/D55 070646
37 LG	☐ S20/D20~D35, S90/D20~D35, S180/D20~D35			
39 & 50 LG	☒ avec adaptateur 28S			
110, 160 & 220 LG	☒ avec adaptateur 32S			



Ring inductor data sheet.

## Sectors

-  Industry
-  Maintenance
-  Automotive workshops

## Applications:

Ring inductors are used for tube bending/heating applications, bolt stripping and release, hydraulic cylinder maintenance, and brazing. They come in a range of different diameters and angles to accommodate any workpiece.

## Application examples:



Steel pipe bending:  
- S180/D20 ring inductor



Heating a pipe:  
- S90/D20 ring inductor



Heating a rail:  
- S180/D25 ring inductor

		$\sphericalangle 20^\circ$	$\sphericalangle 90^\circ$	$\sphericalangle 180^\circ$
Ø Diameter of workpiece to be heated (in mm)	Ø Diameter of the suitable ring inductor (in mm)			
48 < d < 55	Ø 60	L20/D60 078956	L90/D60 079106	L180/D60 069923
56 < d < 65	Ø 70	L20/D70 078963	L90/D70 079113	L180/D70 069930
64 < d < 75	Ø 80	L20/D80 078970	L90/D80 079120	L180/D80 069121
72 < d < 85	Ø 90	L20/D90 078987	L90/D90 079137	L180/D90 069947
80 < d < 95	Ø 100	L20/D100 078994	L90/D100 079144	L180/D100 069954
88 < d < 105	Ø 110	L20/D110 079007	L90/D110 079151	L180/D110 069961
96 < d < 115	Ø 120	L20/D120 079014	L90/D120 079168	L180/D120 069978
104 < d < 125	Ø 130	L20/D130 079021	L90/D130 079175	—
112 < d < 135	Ø 140	L20/D140 079038	L90/D140 079182	—
120 < d < 145	Ø 150	L20/D150 079045	L90/D150 079199	—
128 < d < 155	Ø 160	L20/D160 079052	L90/D160 079205	—
136 < d < 165	Ø 170	L20/D170 079069	L90/D170 079212	—
144 < d < 175	Ø 180	L20/D180 079076	L90/D180 079229	—
152 < d < 185	Ø 190	L20/D190 079083	L90/D190 079236	—
160 < d < 195	Ø 200	L20/D200 079090	L90/D200 079243	—
37 LG			—	
39 & 50 LG		<input type="checkbox"/>	with 28L adaptor	
110, 160 & 220 LG		<input type="checkbox"/>	with 32L adaptor	



Brazing - Preheating and Shrink-fitting			
> Ø 200 & < Ø 300	Production up on request		
110, 160 & 220 LG	<input checked="" type="checkbox"/> with adapter 32L		

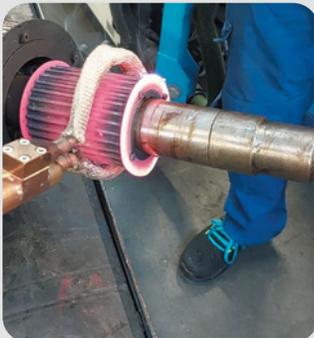
## Sectors

- Industry
- Maintenance
- Construction / Earthworks

## Applications:

Ringinductors are used for pipe bending/heating applications, stripping and releasing bolts, and maintenance of hydraulic cylinders. They come in a range of different diameters and angles to accommodate any workpiece.

## Application examples:



Heating a gear:  
- L180 ring inductor  
- Powerduction 220LG



Extraction of bushings on an electric motor:  
- L20/D200 ring inductor  
- Powerduction 220LG



Cylinder shrink-fitting for hydraulic actuators  
- L20/D200 ring inductor  
- Powerduction 220LG

# SPECIAL INDUCTORS HEAT TUBE

	S180 HEAT TUBE D24	S180 HEAT TUBE D30	S180 HEAT TUBE D37	S180 HEAT TUBE D40	S180 HEAT TUBE D50	S20 Pre Heat ↕ 120 x 50 x 38
	086982	086999	078604	078611	078628	086975
37 LG	□					
39 & 50 LG	□ with <b>28S</b> adapter					
110,160 & 220 LG	□ with <b>32S</b> adapter					
DIFFICULT ACCESS ADAPTER						
 90°-S 082663		□ compatible with 180/B1 □ compatible with 180/B3W □ compatible with 180/B6	□ compatible with S180 HEAT TUBE D37 □ compatible with S180 HEAT TUBE D40 □ compatible with S180 HEAT TUBE D50			



Heat Tube inductors data sheet.

## Sectors

-  Maintenance
-  Automobile
-  HGV workshops

## Applications:

Heat tube inductors are used to instantaneously and precisely heat pipes, tubes or engine parts from within. But they can also be used to extract boiler tubes, worn rings, valve seats, etc.

## Application examples:



Valve seat heating:  
- Heat Tube inductor S180/D40  
- Width Ø 40



Gas boiler maintenance:  
- Heat Tube inductor S180/D50  
- Powerduction 160LG



Valve seat heating:  
- Heat Tube inductor S180/D37  
- Width Ø 40



# SPECIAL INDUCTORS L20 ALU GLOVE - L180 SPIRAL

	<b>L180/Spiral</b> Ø 80 x 102 065000	<b>L20 Alu Glove</b> ↕ 127 x 60 x 25 069114	<b>L180 Spiral Planage</b> ↕ 124 x 88 x 88 087729
<b>37 LG</b>		—	
<b>39 &amp; 50 LG</b>		□ with <b>28L</b> adaptor	
<b>110, 160 &amp; 220 LG</b>		□ with <b>32L</b> adaptor	
FERRITE PROTECTOR			
			
<b>Spiral</b> 069701		<b>L180 Levelling</b> 087736	



Spiral inductor data sheet.

## Sectors

-  Industry
-  Maintenance
-  Automotive workshops
-  The shipbuilding industry

## Applications:

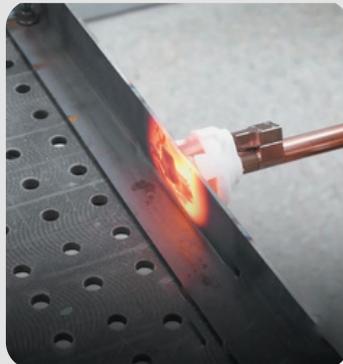
*Special inductors are used for more specific applications, such as removing adhesives, stickers, etc.*

*The Spiral inductor can be used to heat thick material for straightening sheet metal, as well as for heat shrinking. The protective cover ensures that it remains at a safe distance from the workpiece.*

## Application examples:



Sticker removal:  
- Inductor L20 Alu Glove



Realigning a welded assembly:  
- L180/Spiral inductor

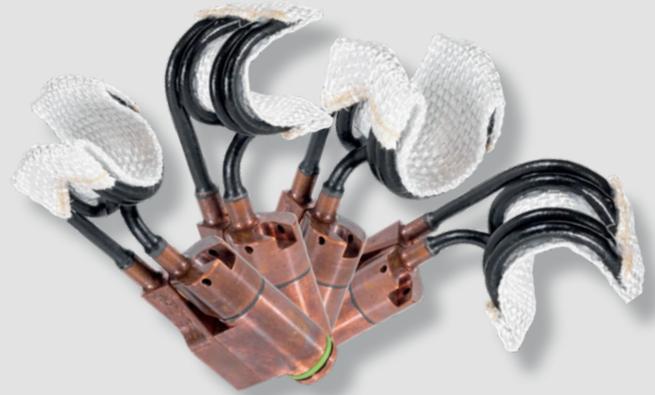


Heating circles for workpiece rectification prior to welding:  
- L180/Spiral inductor

# SPECIAL INDUCTORS

## BRAZING

 * = supplied as standard	<b>L90 BRAZ 16</b> Ø 1/2" / 16 mm 076907	<b>L90 BRAZ 28</b> Ø 1" / 28 mm 076921	<b>L180 BRAZ 16</b> Ø 1/2" / 16 mm 076914	<b>L180 BRAZ 28</b> Ø 1" / 28 mm 076938
	<b>37, 39 &amp; 50 LG</b> —			
<b>110, 160 &amp; 220 LG</b>		☒ with <b>32L</b> adaptor		



**Brazing** Brazing using our BRAZ inductors, available in 2 positions 90 and 180 degrees recommended for brazing (600°C to 1000°C). Widely used for plumbing and hydraulics, they produce clean, distortion-free brazing joints. **The use of flux stripper (chemical substance, ref. 047440) cleans and prepares the surfaces of the parts that are being joined.** The flux helps optimise the brazing process to ensure a durable bond between the two materials. It is recommended when combining two copper components, but is necessary when connecting all other materials.



BRAZ inductors data sheet.

### Sectors

-  Maintenance
-  Industry

### Applications:

*Specially designed for brazing, they are widely used in plumbing and the hydraulics industry. They provide clean, deformation-free brazing.*

### Application examples:



Brazing with a rod on a Ø28 fitting:  
- L90 BRAZ inductor



Assembly of copper parts :  
- L90 BRAZ inductor  
- Powerduction 220LG



Joining workpieces:  
- L90 BRAZ inductor



Ø 18 Side Spiral wire 054806	Ø 18 Front Spiral wire 079977	Flexible 800 mm	Braided wire for spiral inductor 054813	STICKER removal inductor 10R 066601
Ø 21 Side Spiral wire 079953	Ø 21 Front Spiral wire 079984			
Ø 24 Side Spiral wire 054790	Ø 24 Front Spiral wire 079991			
Ø 27 Side Spiral wire 079960	Ø 27 Front Spiral wire 080003			
Ø 30 Side Spiral wire 078819	Ø 30 Front Spiral wire 080010			
		Length 800 mm	Straight wire for spiral inductor 054868	

10R - 10R PRO

**Sectors**

- Maintenance
- Automotive workshops
- Agricultural workshops
- Locksmithing

**Applications:**

*Inductors for the Powerduction 10R are designed to easily release and remove mechanical components in a matter of seconds. They are particularly well suited to applications in the automotive maintenance and agricultural sectors, and locksmithing.*

**Application examples:**



Releasing the joint of a wishbone:  
- Flexible inductor  
- Powerduction 10R



Releasing a bolt:  
- L180/Spiral inductor  
- Powerduction 10R



Heating on steel bar:  
- 10R/B5 inductor  
- Powerduction 10R



**Industry**



**Maintenance**

<p><b>Releasing</b> Bolt /screw/pipe S/L ring inductor</p> 	<p><b>Unjamming</b> Industrial tubing Heat Tube inductor</p> 	<p><b>Bushing removal</b> Gearing L ring inductor</p> 	<p><b>Releasing</b> Industrialbolt L180 ring inductor</p> 	<p><b>Bushing removal</b> Motor hubselectric L20/D200 inductor</p> 
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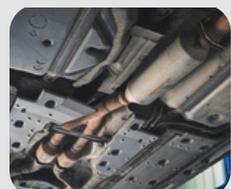
**Truck**

<p><b>Straightening</b> Shock absorbers L90 inductor</p> 	<p><b>Unjamming</b> Leaf spring</p> 	<p><b>Straightening</b> Chassis L90 inductor</p> 	<p><b>Unjamming</b> Steeringtie-rod L90 inductor</p> 
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**Automobile**

**Disassembly**

<p><b>Unjamming</b> Steeringtie-rod L90 inductor</p> 	<p><b>Unjamming</b> Brake discs Inductor S20/B1</p> 	<p>Exhaust line S/L90 inductor</p> 	<p><b>Releasing</b> Crankshaft damper/pulley S/L70 inductor</p> 	<p><b>Ex traction</b> Valve seat Heat Tube inductor</p> 
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**Agricultural**

<p><b>Straightening</b> Bucket teeth L ring inductor</p> 	<p><b>Unjamming</b> Steeringtie-rod L90 inductor</p> 	<p><b>Straightening</b> Agricultural maintenance L180 Inductor</p> 	<p><b>Unjamming</b> Fork tooth S35 Inductor</p> 
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# POWERDUCTION 10R

## THE MULTI-PURPOSE SPIRAL



Ø 21 Side	Spiral wire 079953		
Ø 27 Side	Spiral wire 079960		
Ø 18 Front	Spiral wire 079977		
Ø 21 Front	Spiral wire 079984		
Ø 24 Front	Spiral wire 079991		
Ø 27 Front	Spiral wire 080003		
Ø 30 Front	Spiral wire 080010		
Ø 18 Side	Spiral wire 054806	Ø 18 Side	Spiral wire 054806
Ø 24 Side	Spiral wire 054790	Ø 24 Side	Spiral wire 054790
Ø 30 Side	Spiral wire 078819	Ø 30 Side	Spiral wire 078819
800 mm	Flexiblebraided wire 054813	800 mm	Flexiblebraided wire 054813
800 mm	Straight rigid wire 054868	800 mm	Straight rigid wire 054868
Powerduction 10R Pro 080195		Powerduction 10R 062504	

### Areas of application



Automotive workshops



Maintenance



Locksmithing



Construction metalwork

### Advantages

- Compact and **very light (3.5 kg)**
  - Highly portable, it can be carried slung over the shoulder
  - Can be connected at any location with a **single-phase outlet**
  - Quick set-up: connect, use, heat
  - Power **1200 W**
  - Supplied in a carry case with 5 or 12 inductors, spirals, braided and flexible wires
- An induction power source equipped with a spiral inductor, the Powerduction 10R is the ideal tool for de-seizing applications. With 1200 W of power, it's compact and lightweight (3.5 kg), and comes with a shoulder strap. With its simple, fast set-up and single-phase plug, this power source is the perfect choice for all on-site operations.

### References:

10R (5inductors)

ref. 062504 230V

ref. ☒ 068643 230V

10R PRO (12 inductors)

ref. 080195 230V

ref. ☒ 080300 230V

### Optional Extra

Sticker-removal inductor

066601



### Optional Extra

Decoupling Inductor

079472



# POWERDUCTION 37LG

THE COMBINATION OF POWER AND MOBILITY



### Areas of application



Motorised machinery workshops



Automotive workshops



Maintenance



Automobile

### Advantages

- Compact and portable (15 kg weight)
- Power: **3,700 W** adjustable in steps of 250 W
- Duty cycle at max. power : 7 min
- Supplied with S90 inductor (ref. 058927) or S180/B3W (ref. 067899)
- Power source with **liquid cooling (1.5 l)**
- Can be powered by a generator (4 kw)

Weighing in at only 15 kg and powered by single-phase 230 V power supply, the POWERDUCTION 37LG represents an excellent combination of power and portability. As it plugs into a 16 A socket, it is particularly recommended for use in machine, automotive or maintenance workshops.

### References:

37LG (S90)

ref. 056992 230V

ref. ☒ 072510 230V

37LG (S180/B3W)

ref. 083387 230V

ref. ☒ 083394 230V

# POWERDUCTION 39LG

THE PERFECT BALANCE FOR AUTOMOTIVE WORKSHOPS



## Areas of application



Automotive workshops



Maintenance



HGV workshop



Automobile

## Advantages

- Compact and **easy to manoeuvre in the workshop**
- Power: **3,700 W** adjustable in steps of 250 W
- Duty cycle at max. power : 15 min
- Mains supply with **PFC technology** and **PROTEC 400**
- Inductor cable: 3 m + support arm
- Maximum power for **230 V socket with 16 A fuse**
- Liquid-cooled power source (7 L)

This unit is also rated at 3,700 W, and is fitted with a 7-litre coolant tank. Because of this, it can be used continuously at maximum power for 15 minutes.

To make it easier to move around the workshop, the POWERDUCTION 39LG is mounted on castor wheels and has a built-in bracket to support its 3 m lance.

## References:

39LG (C20/B1)

39LG (S90)

ref. 058583 230V

ref. 080027 230V

## Areas of application



Automotive workshops



Agricultural &  
Construction workshops



HGV workshop



Maintenance

## Advantages

- Power: **5,200 W continuous** (100% at 5200 W)
- **Single-phase power supply** with **PFC technology** and **PROTEC 400**
- Power cable: 8 m
- Inductor cable: 3 m + support arm
- Supplied with complete C20/B1 inductor (ref. 056862)
- Power cable for **connection to a 16 A socket**
- Liquid-cooled power source (7 L)

Able to deliver continuous heating at full power, the POWERDUCTION 50LG is the most high-performance model in the single-phase range. Suitable for intensive applications, its high power capability also means it can be used for straightening metal structures. Like the 39LG, it is equipped with a PFC (Power Factor Correction) and PROTEC 400 power supply.

These technologies offer 3 major advantages; can be used on a mains supply of 185 V to 265 V with overvoltage protection up to 400 V, up to 30% energy savings, and can be plugged into a 25 A / 230 V socket for maximum performance.

## References:

50LG (C20/B1)

ref. 055599 230V

# POWERDUCTION 50LG

QUIET POWER



# COMBIDUCTION AUTO 50LG

2 POWER SOURCES IN 1



### Areas of application



### Advantages

- Power: **5,200 W continuous** (100% at 5200 W)
- **Single-phase power supply** with **PFC technology** and **PROTEC 400**
- Power cable for **connection to a 16 A socket**
- Power cable: 8 m
- Inductor cable: 3 m + support arm
- Supplied with complete C20/B1 inductor (ref. 056862)
- Supplied with glass inductor + adhesive inductor (ref. 053339 & ref. 053373)
- Liquid-cooled power source (7 L)
- Pneumatic foot pedal

The COMBIDUCTION AUTO 50 LG delivers immediate heating power for multipurpose applications on steel or aluminium. Equipped with two lances, it features a combination of inductors designed for vehicle bodywork and mechanical processes. This induction unit is the ideal tool for garages and body shops.

### Reference:

**Combiduction Auto 50LG (C20/B1)**

ref. 065901 230V

### Optional Extra

Dent-Removal Inductor  
Ref. 054776



### Optional Extra

Spiral inductor  
Ref. 054783



Includes

Adhesive inductor  
Ref. 053339



Includes

Glass inductor  
Ref. 053373



### Areas of application



# POWERDUCTION 110LG

CONCENTRATED PERFORMANCE

### Advantages

- Power: **11 kW continuous power (max power)**
- Works on **three-phase sockets 16 A / 400 V or 35 A / 230 V**
- Power cable: 5m
- Inductor cable: 4 m + support
- Removable handle for improved usability
- Supplied with a **pneumatic control pedal**
- Liquid-cooled power source (7 L)

Operated at 400 V three-phase, the Powerduction 110LG combines a very impressive 11 kW of power in a compact design. This high-performance unit is effective in a wide range of applications, such as truck workshops and industrial production facilities. For improved operator convenience, it is supplied with a pneumatic foot pedal.

### References:

**110LG (L90)**

ref. 058590 400V

ref. 065246 208 - 240V

**110LG (L20/B4)**

ref. 083400 400V

### Optional Extra

POWERDUCTION Heat  
Controller  
061644



# POWERDUCTION 160LG

HIGH PERFORMANCE



## Areas of application

- HGV, agricultural & construction workshops
- Maritime & railway

- Maintenance
- Industry

## Advantages

- **16kW continuous power** (16 kW maximum power)
- Works on **three-phase socket 32 A / 400 V or 45 A / 230 V**
- Liquid-cooled power source (30 L)
- Power cable: 4 m
- Inductor cable: 6 m + support
- Removable handle for improved usability
- Supplied with a **pneumatic control pedal**

Running on a three-phase 400 V power supply, the POWERDUCTION 160LG has an output of 16 kW. With a powerful output, integrated 30-litre coolant tank and advanced on-board technology, it will provide exceptional performance in industrial environments and heavy-duty applications. The unit is also ergonomically designed, with a support pole to accommodate the 6 m inductor cable, 4 m power lead, pneumatic foot pedal, and 4 castor wheels for complete stability.

## References:

**160LG (L90)**

ref. 057814 400V

ref. 065253 208 - 240V

**160LG (L20/B4)**

ref. 083417 400V

Optional Extra

POWERDUCTION Heat Controller

061644



## Areas of application

- HGV, agricultural & construction workshops
- Maritime & railway
- Forge

- Maintenance
- Industry

## Advantages

- **Continuous power 22 kW** (22 kW max. power)
- Works on **three-phase socket 32 A / 400 V**
- Liquid-cooled power source (30 L)
- Power cable: 4 m
- Inductor cable: 6 m + support arm (ref. 066861) or 10 m + support arm (ref. 074576)
- Removable handle for improved usability
- Supplied with a **pneumatic control pedal**
- Supplied with L20/B4 inductor (ref. 067882)

The POWERDUCTION 220LG induction heating unit delivers immediate heating power for unsizing and heating steel and aluminium. The flameless heating process is precise, instantaneous, and safe for use in the workplace. With its liquid cooling system, it can work continuously at its maximum power of 22 kW.

Designed for heavy-duty usage on 32 A sockets, the high performance and outstanding heating quality make it an essential solution in industrial environments.

## References:

**220LG (L20/B4)**

ref. 066861 6 m cable 400V

ref. 074576 10 m cable 400V

Optional Extra

POWERDUCTION Heat Controller

061644



# POWERDUCTION 220LG

THE STRENGTH



SALES  
SERVICE  
SUPPORT

(973) 768-9812  
WWW.INNOVATIVECRTE.COM



# SELECTION GUIDE

## POWERDUCTION



**10 R**

ref.  
062504



**10R PRO**

ref.  
080195



**37 LG**

ref.  
056992

ref.  
083387  
ref.  
083394 UK



**39 LG**

ref.  
058583

ref.  
080027



**50 LG**

ref.  
055599

**COMBI50 LG**

ref.  
065901



**110 LG**

ref.  
065246

ref.  
058590

ref.  
083400



**160 LG**

ref.  
065253

ref.  
057814

ref.  
083417

### TECHNICAL DATA

Power supply (50/60 Hz)	230 V, 1~	230 V, 1~	230 V, 1~	230 V, 1~	230 V, 1~	230 V, 3~	400 V, 3~	230 V, 3~	400 V, 3~
Fuse	16 A	16 A	16 A	25 A	25 A	35 A	16 A	45 A	32 A
Power	1.2 kW	3.7 k.	3.7 k.	5.2 kW	5.2 kW	11 kW		16 kW	
Frequency	45 ÷ 100 kHz	15 ÷ 30 kHz	20 ÷ 60 kHz	20 ÷ 60 kHz	20 ÷ 80 kHz	20 ÷ 60 kHz		20 ÷ 60 kHz	
Power Factor Correction	—	—	•	•	•	—		—	
PROTEC 400 (P400)	—	—	•	•	•	—		—	
Coolant liquid	Air	1.5 L	7 L	7 L	7 L	7 L		30 L	
Power Supply Cable	2 m	2 m	6 m	8 m + extension 16 A	8 m + extension 16 A	5 m		4 m	
Cable inductor	1 m	2 m	3 m	3 m	3 m	4 m		6 m	
Dimensions	23 x 14 x 10 cm	45 x 28.5 x 25 cm	53 x 70 x 37 cm	59 x 88 x 59 cm	59 x 88 x 59 cm	59 x 90 x 59 cm		78 x 118 x 58 cm	
Weight	3 kg	15 kg	50 kg	70 kg	70 kg	80 kg		150 kg	

### HEATING CAPACITIES

Duty Cycle 35 °C / 100 %	2 min	7 min	15 min	continuous	continuous	continuous		continuous	
Nut Size 	—	M10 □ 1 s	M12 □ 1 s	M14 □ 1 s	M14 □ 1 s	M18 □ 1 s		M20 □ 1 s	
Sheet Thickness 	—	2 mm □ 5 s	2 mm □ 5 s	2 mm □ 3 s 4 mm □ 5 s	2 mm □ 3 s 4 mm □ 5 s	2 mm □ 2 s 4 mm □ 4 s		2 mm □ 2 s 4 mm □ 4 s	
Metal Rod Diameter 	∅ 8 □ 10 s	∅ 10 □ 15 s	∅ 10 □ 15 s	∅ 10 □ 10 s	∅ 10 □ 10 s	∅ 10 □ 7 s		∅ 10 □ 5 s	

### RECOMMENDED USES

Mechanics									
<b>A u t o</b>									
PL									
Agri									
Construction industry									
General Maintenance 									
Industry 									

# On-Board Technologies

Controlling the heat and maintaining a precise temperature is an important consideration for induction. The POWERDUCTION range incorporates the technology essential for this control, to ensure the most effective results.



## Regulating the Temperature

The Powerduction 110LG, 160LG & 220LG units can be fitted with the intelligent 'Powerduction Heat Controller' module. It uses thermal sensors, and is connected to the electronic board so that it can be programmed directly via the interface of the Powerduction.

This enables a set heating temperature to be maintained between 80°C and 350°C.

This is beneficial for pre-heating workpieces prior to welding, shrink-fitting, and paint stripping.



## Controlling the runtime

The latest generation of POWERDUCTION units feature a "Timer" mode.

This function allows precise adjustment of the heating time (from 1 to 30 seconds) to help achieve the right degree of precision (excludes the 37 LG).



# SMALL Ø16

## INDUCTORS

* = supplied as standard	<b>S90 (90°)</b> 058927	<b>S70 (70°)</b> 061569	<b>S180 (180°)</b> 059269	<b>S20/B1 (20°)</b> 064874	<b>S180/B1 (180°)</b> 064881	<b>S180/B3W (180°)</b> 067899	<b>S180/B6 (180°)</b> 087002
<b>37 LG</b>	<input type="checkbox"/> *			<input type="checkbox"/>			
<b>39 &amp; 50 LG</b>				<input type="checkbox"/> with 28S adapter			
<b>110, 160 &amp; 220 LG</b>				<input type="checkbox"/> with 32S adapter			

	<b>S20/D20</b> 078796	<b>S90/D20</b> 078871	<b>S180/D20</b> 069985
	<b>S20/D25</b> 078802	<b>S90/D25</b> 078888	<b>S180/D25</b> 069992
	<b>S20/D30</b> 078819	<b>S90/D30</b> 078895	<b>S180/D30</b> 070592
	<b>S20/D35</b> 078826	<b>S90/D35</b> 078901	<b>S180/D35</b> 070608
	<b>S20/D40</b> 078833	<b>S90/D40</b> 078918	<b>S180/D40</b> 070615
	<b>S20/D45</b> 078840	<b>S90/D45</b> 078925	<b>S180/D45</b> 070622
	<b>S20/D50</b> 078857	<b>S90/D50</b> 078932	<b>S180/D50</b> 070639
	<b>S20/D55</b> 078864	<b>S90/D55</b> 078949	<b>S180/D55</b> 070646
<b>37 LG</b>	<input type="checkbox"/> S20/D20~D35, S90/D20~D35, S180/D20~D35		
<b>39 &amp; 50 LG</b>	<input checked="" type="checkbox"/> with 28S adapter		
<b>110, 160 &amp; 220 LG</b>	<input checked="" type="checkbox"/> with 32S adapter		

S180 Heat Tube		S20 Pre Heat <b>NEW</b>	
	<b>D24</b> 086982		<b>D24</b> 086975
	<b>D30</b> 086999		<b>D30</b> 086975
	<b>D37</b> 078604		
	<b>D40</b> 078611		
	<b>D50</b> 078628		
<b>39 &amp; 50 LG</b>	<input checked="" type="checkbox"/> with 28S adapter	<input type="checkbox"/> with 28S adapter	
<b>110, 160 &amp; 220 LG</b>	<input checked="" type="checkbox"/> with 32S adapter	<input type="checkbox"/> with 32S adapter	

DIFFICULT ACCESS ADAPTER	
	<input type="checkbox"/> compatible with 180/B1 <input type="checkbox"/> compatible with S180 HEAT TUBE D37 <input type="checkbox"/> compatible with 180/B3W <input type="checkbox"/> compatible with S180 HEAT TUBE D40 <input type="checkbox"/> compatible with 180/B6 <input type="checkbox"/> compatible with S180 HEAT TUBE D50

ADAPTORS	
	<b>28S</b> M28 Ø16 064485
	<b>32S</b> M32 Ø16 064508
<b>39 &amp; 50 LG</b>	<input type="checkbox"/> 28S M28 Ø16
<b>110, 160 &amp; 220 LG</b>	<input type="checkbox"/> 32S M32 Ø16

Protection kit for ring inductors 077386

Glue kit for inductor 075948

Bi-component Power Epoxy adhesive 150°C 054851

Boxes		
 <b>28S/BtypeW</b> for 39LG & 50LG 072497 Includes: S20/B1 (x1) S180/B1 (x1) S180/B3 (x1) 28S (x1) B1 (x1) B3 (x1)	 <b>32S/BtypeW</b> for 110LG & 160LG 072503 Includes: S20/B1 (x1) S180/B1 (x1) S180/B3 (x1) 32S (x1) B1 (x1) B3 (x1)	 <b>Lbox</b> 065796 Includes: L70 (x1) L180 (x1)

Ferrites											
<b>B1</b> 053823	<b>B2</b> 053458	<b>B3</b> 067875	<b>B4</b> 053755	<b>B5</b> 079489	<b>B1 (x5)</b> 079380	<b>B1 (x5)</b> 079397	<b>B2</b> 056916	<b>B3</b> 072527	<b>B4</b> 054844	<b>Spiral</b> 069701	<b>Leveling</b> 087736

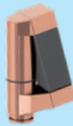
Carriage for 32L adaptor inductor 075955

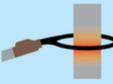
4 or 8 wheels

# LARGE Ø32

INDUCTORS

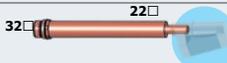
**NEW**

								
* = supplied as standard	<b>L90 (90°)</b> 059788	<b>L70 (70°)</b> 059771	<b>L180 (180°)</b> 059795	<b>L180/Spiral</b> 065000	<b>L180 Leveling</b> 087729	<b>L20/B4 (20°)</b> 067882	<b>L20 Alu Glove</b> 069114	<b>L180/B4 (180°)</b> 079786
<b>39 &amp; 50 LG</b>	☐ with 28L adaptor						—	
<b>110, 160 &amp; 220 LG</b>	☐ with 32L adaptor			☐ with 32L adaptor		☐ with 32L adaptor		☐ with 32L adaptor

			
Ø 60	<b>L20/D60</b> 078956	<b>L90/D60</b> 079106	<b>L180/D60</b> 069923
Ø 70	<b>L20/D70</b> 078963	<b>L90/D70</b> 079113	<b>L180/D70</b> 069930
Ø 80	<b>L20/D80</b> 078970	<b>L90/D80</b> 079120	<b>L180/D80</b> 069121
Ø 90	<b>L20/D90</b> 078987	<b>L90/D90</b> 079137	<b>L180/D90</b> 069947
Ø 100	<b>L20/D100</b> 078994	<b>L90/D100</b> 079144	<b>L180/D100</b> 069954
Ø 110	<b>L20/D110</b> 079007	<b>L90/D110</b> 079151	<b>L180/D110</b> 069961
Ø 120	<b>L20/D120</b> 079014	<b>L90/D120</b> 079168	<b>L180/D120</b> 069978
Ø 130	<b>L20/D130</b> 079021	<b>L90/D130</b> 079175	—
Ø 140	<b>L20/D140</b> 079038	<b>L90/D140</b> 079182	—
Ø 150	<b>L20/D150</b> 079045	<b>L90/D150</b> 079199	—
Ø 160	<b>L20/D160</b> 079052	<b>L90/D160</b> 079205	—
Ø 170	<b>L20/D170</b> 079069	<b>L90/D170</b> 079212	—
Ø 180	<b>L20/D180</b> 079076	<b>L90/D180</b> 079229	—
Ø 190	<b>L20/D190</b> 079083	<b>L90/D190</b> 079236	—
Ø 200	<b>L20/D200</b> 079090	<b>L90/D200</b> 079243	—
<b>37 LG</b>	—		
<b>39 &amp; 50 LG</b>	☐ with 28L adaptor		
<b>110, 160 &amp; 220 LG</b>	☐ with 32L adaptor		

			
* = supplied as standard	<b>L90 BRAZ 16</b> Ø 1/2" / 16 mm 076907	<b>L90 BRAZ 28</b> Ø 1" / 28 mm 076921	<b>L180 BRAZ 16</b> Ø 1/2" / 16 mm 076914
			<b>L180 BRAZ 28</b> Ø 1" / 28 mm 076938
<b>37, 39 &amp; 50 LG</b>	—		
<b>110, 160 &amp; 220 LG</b>	☐ with 32L adaptor*		

	<b>L180R X</b> Made to order	
<b>37, 39 &amp; 50 LG</b>	—	
<b>110, 160 &amp; 220 LG</b>	☐ with 32L adaptor	

ADAPTORS	
<b>28L</b> M28 Ø22 064492	
<b>32L</b> M32 Ø22 064515	
<b>37 LG</b>	—
<b>39 &amp; 50 LG</b>	☐ 28L M28 Ø22
<b>110, 160 &amp; 220 LG</b>	☐ 32L M32 Ø22



COMPLET (Ø 28)			
<b>C20/B1 (20°)</b> 056862		<b>C180/B1 (90°)</b> 056879	
	<b>B1</b>		<b>B1</b>
			<b>C180/B2 (90°)</b> 056886
			<b>B2</b>
<b>37 LG</b>	—		
<b>39 &amp; 50 LG 110, 160 &amp; 220 LG</b>	✓*		✓

# THINGS YOU NEED TO KNOW

## ABOUT INDUCTION

### 1. Heating material

Depending on the material and the type of power source used, heating times and efficiency will vary. It's important to choose the right machine for your application and the type of materials you'll be working with.

For the best and quickest results, regardless of the thickness of the material, refer to the comparison table below:

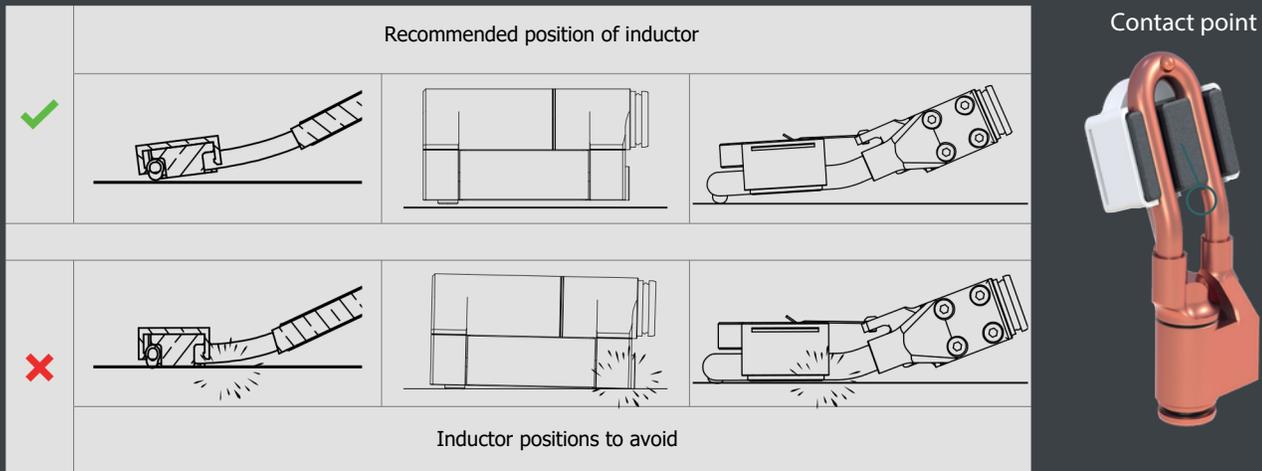
Power sources	Steel	Copper	Brass	Aluminum	Zinc	Iron	Cast iron
10 R	+	-	-	-	-	-	-
37LG / 39LG	+	-	-	-	-	-	-
50 LG	++	-	-	+	-	-	++
110LG / 160LG / 220LG	+++	+++	+++	+++	+	+++	+++

### 2. Ferrite inductors

Positioning the inductor correctly is an essential part of maximising the service life of the ferrite. We therefore recommend being careful with the positioning in order to avoid the risk of sparks.

For ferrite inductors, correct placement is done simply by placing the contact point of the inductor on the surface of the material that you are working on. If the inductor is not positioned as recommended, it could sustain premature wear. To ensure effective heating, keep the inductor moving.

For more details on the best way to use the inductor, please visit the web page: <https://planet.gys.fr/pdf/manual/fr/056862.pdf>



The inductors must be protected at all times to avoid premature wear. See below for ferrite protectors suitable for use with the inductors.



**B1**  
056909



**B3**  
072527



**B4**  
054844



**Spiral**  
069701

### 3. Coolant liquid

To ensure that your machine operates at its optimum duty cycle, please fill the coolant tank to maximum level. Use the coolant specified by GYS, which is available in different volumes:

- 2 L 082212 recommended for 37LG
- 5 L 062511 recommended for 39/50LG
- 10 L 052246 recommended for 39/50/110/160/220LG



For regular and intense usage, we recommend replacing the coolant every year. The coolant must be changed every 2 years, regardless of how often the unit is used, to minimise the risk of deterioration in the Powerduction coolant system.

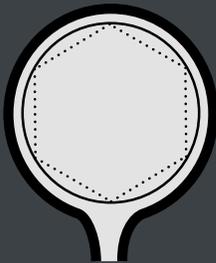
#### 4. Ring inductors

The ring inductor must never come into contact with the workpiece that it is heating (risk of damaging the inductor). We highly recommend applying a protective insulating fabric.

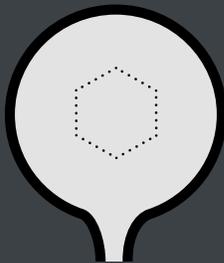


Protection kit for ring inductors  
077386

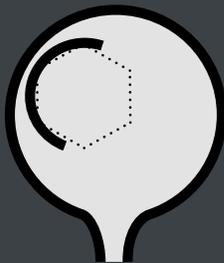
You should also ensure that you use the correct diameter ring, and position it correctly for heating:



A gap must be left between the ring and the workpiece to limit the risk of the protective cover overheating, and the workpiece getting stuck in the ring as it expands. (Refer to the tables on pages 5 and 6)



If the diameter is too small, heating will be less effective. The unit will not be able to deliver its maximum power to the workpiece.



If the workpiece is not positioned centrally in the ring, it will not be heated evenly. The side of the workpiece closest to the inductor will be heated more.

For more details on the best way to use the inductor, please visit the web page:  
<https://planet.gys.fr/pdf/manual/fr/069985.pdf>

#### 5. Powering your machine off a generator

All our three-phase and single-phase power sources can be run on generators. When using it on a regular basis, please ensure that the generator is powerful enough for the job.

For the best match for your power source, please refer to the catalogue. Also check that the protection devices on your generator (fuses/circuit breakers) are suitable for your GYS induction units.

	 Protected & compatible power generator (+/-15 %)
10 R	1.5 kW
37LG / 39LG	4 kW
50 LG	6 kW
110 LG	15 kW
160 LG	16 kW
220 LG	22 kW



LE ATEL  
SÉCURITÉ À RESPECTER

ATTENTION PROTECTION INDIVIDUELLE	ATTENTION AUX MACHINES

POWERDUCTION  
220iC

GYS

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SERVICE  
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