

# POWERDUCTION Induction-Heating Systems



Induction heating is a particularly efficient process for heating a metal's core in only a fraction of a second. Ideal for mechanical engineering, car bodywork or general maintenance work; this method of instantly and precisely transferring heat only works on ferrous materials and has no effect on rubber or plastics. This heating process is completely localised and is considerably safer for the workplace since there is no gas or flames involved. Releasing, unseizing or removing stuck parts could not be easier. GYS' POWERDUCTION range is based on this very principal and consists of eight products with different power levels depending on the task at hand.

#### MECHANICS AND MAINTENANCE

- releasing or disassembling:
- steering rods
- steering ball joint
- brake discs - brake hoses
- exhaust manifold flanges
- exhaust pipes
- shock absorber nuts
- thread-locked screws
- heating longerons (except HLE steels)
- releasing bolts

#### **CAR-BODY REPAIR**

- removing steel or aluminium parts
- straightening bent chassis (except HLE steel)

#### INDUSTRY

- annealing metal parts
- heating to bend
- brazing
- pre-heating



#### Secure This flameless machine allows users to work near heat-sensitive or flammable areas

near heat-sensitive or flammable areas without causing damage. This process is a much safer alternative to the traditional induction-heating torch.







Precise Only the area near the inductor is heated. Targeting a localised area becomes very simple.



Instantaneous This heat is diffused from the metal's core in only a few seconds. The action happens very quickly.







## POWERDUCTION RANGE EIGHT LEADING INDUCTION-HEATING MACHINES

Designed and manufactured entirely in France, the POWERDUCTION range includes eight separate products, each designed to carry out multiple tasks. The POWERDUCTION 10R, 37LG, 39LG, 50LG, COMBI 50LG, 110LG, 160LG and 220LG offer distinctly different levels of performance and ergonomics and are ideal for automotive work, HGVs, construction work, car bodywork, general maintenance and industrial workshops. This range of induction-heating machines is designed to solve technical issues faced by professionals and allow them to perform more complex repairs.

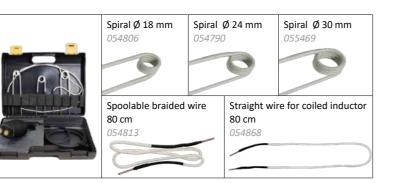


Weighing in at only 15 kg and powered by single-phase, 230 V power supply, the POWERDUCTION 37LG represents the perfect blend of power and portability. With 3,700 W of power, it is highly recommended for use in general repairs as well as automotive and maintenance workshops.





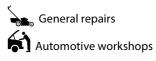
An induction-heating appliance equipped with a spiral inductor; the POWERDUCTION 10R is the ideal decoupling tool. With 1,200 W of power it is still both compact and lightweight (3.5 kg) and it comes with a practical strap so that it can be carried over the shouldler. Easy and quick to start up on a single-phase socket, this power source is the perfect tool for all on-site operations.

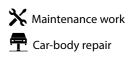




POWERDUCTION 37LG, THE PERFECT COMBINATION OF POWER AND MOBILITY

#### Its uses:





#### Its advantages:

- Compact and portable (15 kg)
- Power: 3,700 W that can be set in increments of 250 W
- Duty cycle at max. power : 7 min
- Delivered with an S90 inductor (ref. 058927)
- Liquid-cooled power source (1.5 L)

## POWDERDUCTION 39LG,

THE PERFECT COMPANION FOR CAR WORKSHOPS

#### Its uses:

Automotive workshops Truck workshops

X Maintenance work Car-body repair

#### Its advantages:

- Compact and easy to move around the workshop
- Power: 3,700 W that can be set in increments of 250 W
- Duty cycle at max. power : 15 min
- Power supply equipped with PROTEC 400 and PFC technology
- Inductor cable: 3 m (and the length of the machine's arm)
- Delivered with complete C20/B1 inductor (ref. 056862)
- Maximum power on a 230 V socket with 16 A fuse
- Liquid-cooled power source (7 L)

It also boasts 3,700 W of power alongside a 7-litre coolant tank. Thanks to this feature, it can be used at full power for 15 minutes without stopping. To make it easier to move around the workshop, the POWERDUCTION 39LG is mounted on castor wheels and has an built-in bracket to support its 3 m arm.





### **POWERDUCTION 50LG**, QUIET POWER

Its uses:

Automotive workshops Truck workshops

Agricultural & construction workshops X Maintenance work

#### Its advantages:

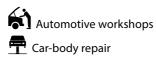
- Power: 5,200 W of continuous power (5,200 W at 100%)
- Single-phase power supply with PROTEC 400 and PFC technology Power cable: 8 m
- Inductor cable: 3 m (and the length of the machine's arm)
- Delivered with complete C20/B1 inductor (ref. 056862)
- Power lead for use with a 16 A plug
- Liquid-cooled power source (7 L)

Capable of continuous, full power heating, the POWERDUCTION 50LG is the most efficient in the single-phase range. Ideal for heavy-duty applications, this device's high power levels also make it well suited for straightening metal structures. Like the 39LG, it is equipped with a PFC (Power Factor Correction) and PROTEC 400 technology. These technologies offer four major advantages; they can be used on 185 - 265 V electrical networks, they are protected against overvoltages up to 400 V, boast energy savings of 30% and can be used on a 25 A / 230 V socket.



### COMBIDUCTION AUTO 50LG, 2-IN-1 INDUCTION-HEATING APPLIANCE

#### Its uses:



- Agricultural workshops

### X Maintenance work

#### Its advantages:

- Power: 5,200 W of continuous power (5,200 W at 100%)
- Single-phase power supply with PROTEC 400 and PFC technology • Power lead for use with a 16 A plug
- Power cable: 8 m
- Inductor cable: 3 m (and the length of the machine's arm)
- Delivered with complete C20/B1 inductor (ref. 056862)
- Delivered with a glass inductor and a glue inductor (ref. 053339 & ref. 053373)
- Liquid-cooled power source (7 L)
- Pneumatic foot pedal





**Optional Extras** 

- Includes Glue inductor Ref. 053339
- Includes Glass inductor Ref. 053373
- **Optional Extras** Spiral inductor Dent-Removal Inductor Ref. 054783 Ref. 054776

The COMBIDUCTION AUTO 50LG provides immediate heating power for all kinds of steel and aluminium work. Equipped with two mechanical arms, this versatile machine combines both bodywork and mechanical inductors. This induction unit is the ideal tool for garages and body shops.

### **POWERDUCTION 110LG**, CONDENSED-DOWN EFFICIENCY

#### Its uses:

- HGV, agricultural & construction workshops
- Shipyards & railways

X Maintenance work Industry

#### Its advantages:

- Power: 11 kW of continuous power (max power)
- Works on 16 A / 400 V or 35 A / 230 V three-phase power outlets
- Power cable: 5 m
- Inductor cable: 4 m (and the length of the machine's arm)
- Easy to transport and use with its removable handle
- Comes with a pneumatic-control pedal
- Delivered with an L90 inductor (ref. 059788)
- Liquid-cooled power source (7 L)

**Optional Extras** POWERDUCTION Heat Controler 061644

The POWERDUCTION 110LG is a three-phase, 400 V inductionheating machine that provides a mighty 11 kW of power in a small and practical package. True power condensed into one machine; this device has proven itself to be effective in numerous situations including HGV workshops and industrial production facilities. For even more comfort, it comes supplied with a pneumatic-control pedal.





061644

**Optional Extras** POWERDUCTION Heat Controler

Powered by a 400 V, three-phase supply, the POWERDUCTION 160LG achieves a power of 16 kW. The power output combined with its 30-litre tank and on-board technology ensure an unparalleled performance in industrial environments or during demanding operations. Its sophisticated, user-friendly design includes a motorised arm to support the 6 metres of inductor cable, 4 metres of power cable and a pneumatic-control foot pedal as well as four wheels for perfect stability.



## **POWERDUCTION 160LG**,

HIGH PERFORMANCE

🛢 HGV, agricultural & construction workshops Shipyards & railways



• 16 kW of continuous power (16 kW at max. power) • Works on a 32 A / 400 V or 45 A / 230 V three-phase power outlet • Liquid-cooled power source (30 L)

• Inductor cable: 6 m (and the length of the machine's motorised arm) · Easy to transport and use with its removable handle Comes with a pneumatic-control pedal • Delivered with an L90 inductor (ref. 059788)



## **POWERDUCTION 220LG**,

#### THE MOST POWERFUL INDUCTION MACHINE

#### Its uses:

HGV, agricultural & construction workshops Shipyards & railways

X Maintenance work Industry

#### Its advantages:

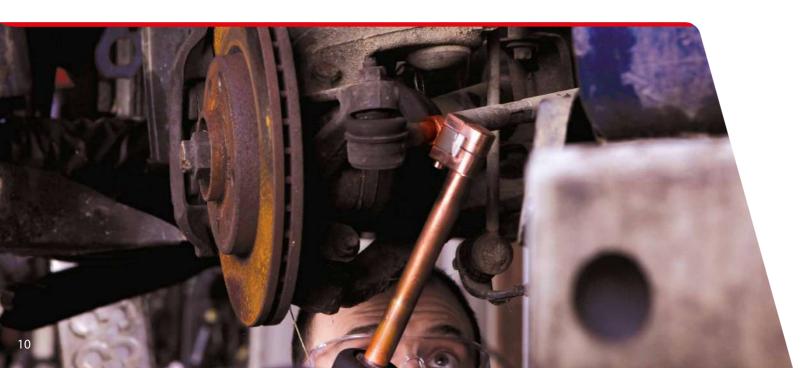
- 22 kW of continuous power (22 kW at max. power)
- Works on a 32 A / 400 V three-phase power outlet
- Liquid-cooled power source (30 L)

• Power cable: 4 m

- Inductor cable: 6 m (and the length of the machine's motorised arm)
- Easy to transport and use with its removable handle
- Comes with a pneumatic-control pedal
- Delivered with a L20/B4 inductor (ref. 067882)



Powerduction 200LG supplies instant heat to unseize, and to heat up, steel or aluminium. Its flameless heating is precise, immediate and completely safe for working environments. Thanks to its liquid cooling, it can work continuously at its maximum power of 22kW. Designed for intensive use on 32 A three-phase socket, its productivity and heating quality make it an indispensable tool for all industrial environments.

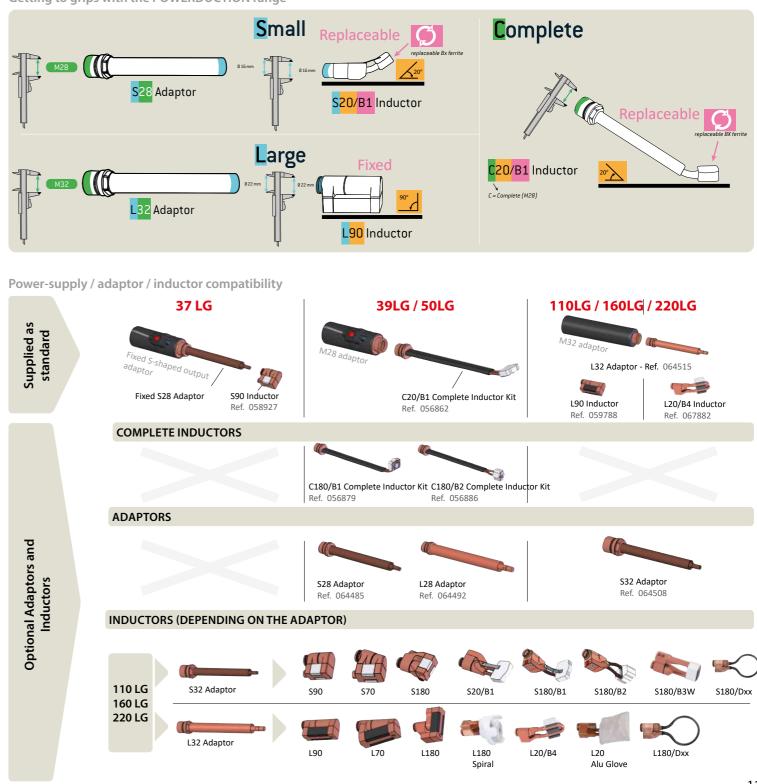


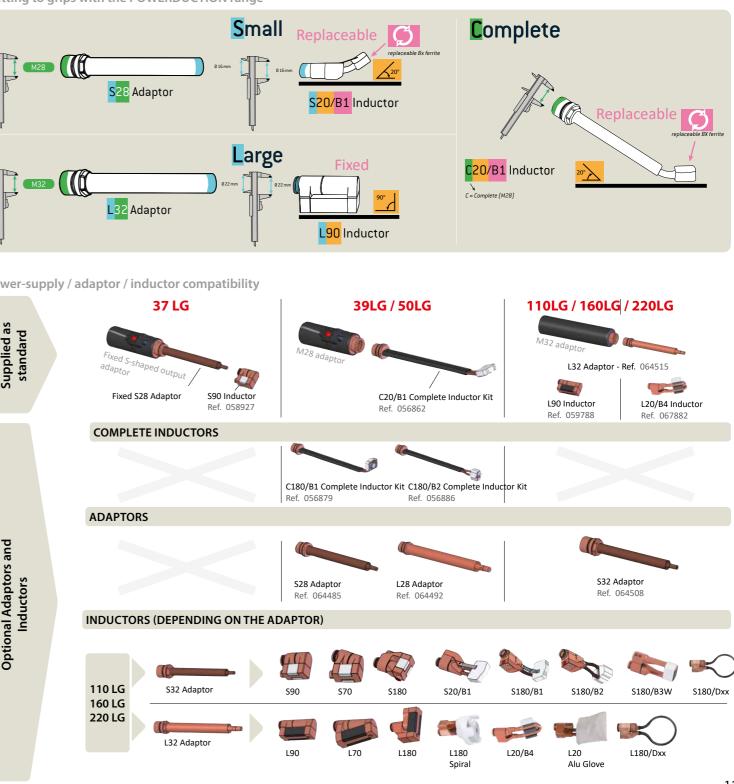
# A RANGE OF ADJUSTABLE **INDUCTORS**

The POWERDUCTION range boasts y a wide range of inductors especially designed for the various different induction applications. The three inductor ranges offered (small, large and complete) can be tailored to the various shapes of the workpieces making it easier to reach difficult areas. Our selection offers multiple inductor combinations giving the user even more ways to meet their induction-heating needs.

Getting to grips with the POWERDUCTION range

GYS







# POWERDUCTION **SELECTION GUIDE**

37 LG

10 R





COMBI 50 LG











220 LG

NEW



		ref. 062504	37 LG ref. 056992	<b>39 LG</b> ref. 058583	50 LG ref. 055599	ref. 065901	ref. 065246	ref. 058590	ref. 065253	ref. 057814	ref. 066861
TECHNICAL DATA								1			
P	Power supply (50/60 Hz)	230 V, 1~	230 V, 1~	230 V, 1~	230V, 1~	230 V, 1~	230 V, 3~	400 V, 3~	230 V, 3~	400 V, 3~	400 V, 3~
	Fuse		16 A	16 A	25 A	25 A	35 A	16 A	45 A	32 A	32 A
Power Frequency Power Factor Correction (PFC)		1.2 kW	3.7 k.	3.7 k.	5.2 kW	5.2 kW	11 kW		16 kW		22 kW
		45 <b>→</b> 100 kHz	15 <b>→</b> 30 kHz	20 →60 kHz	20 <b>→</b> 60 kHz	20 <b>→</b> 80 kHz	20 →60 kHz		20 <b>→</b> 60 kHz		20 <b>→</b> 60 kHz
			_	■			-	_	-	_	_
	PROTEC 400 (P400)	_	_	-	•	•		_	-	_	—
	Coolant	Air	1.5 L	7 L	7 L	7 L	7	L	3(	DL	30 L
	Power Supply Cable	2 m	2 m	2 m	8 m & 16 A extension	8 m & 16 A extension	51	m	4	m	4 m
	Inductor Cable	1 m	2 m	3 m	3 m	3 m	41	m	6	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	3 x 58 cm	78 x 118 x 58 cm
	Weight	3 kg	15 kg	50 kg	70 kg	70 kg	80 kg		150 kg		150 kg
HEATING CAPACITI	IES										
Duty Cycle	35 °C / 100%	2 min	7 min	15 min	continuous	continuous	continuous continuous		continuous		
Nut Size	Ô	_	M10 → 1 s	M12 → 1 s	M14 → 1 s	M14 → 1 s	M18→1s M20→1s		M45 → 2 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	$ \begin{array}{c ccccccccccccccccccccccccccccccccccc$			2 mm → 1 s 4 mm → 3 s	
Metal Rod Diameter	<u>A</u>	Ø 8 → 10 s	Ø 10 → 15 s	Ø 10 → 15 s	Ø 10 → 10 s	Ø 10 → 10 s	Ø 10 ·	⇒7s	Ø 10	<b>→</b> 5s	Ø10→4s
RECOMMENDATIO	NS FOR USE		,	·	'						
Mechanics	Car-Body Repair										
	HGVs										
	Agriculture						-				
	Construction										
General Maintenance	*										
Industry 2											

## **On-Board Technologies**

It is challenging to control the heating process and precise induction temperatures. The POWERDUCTION range offers the technology needed for this type of control, for perfect results every time.



#### **Temperature control**

The POWERDUCTION 110LG, 160LG and 220LG can be fitted with a 'POWER-DUCTION Heat Controler' smart box. Connecting directly to the circuit board, along with thermal sensors, it can be programmed easily through the machine's user-friendly interface. This function allows a heating set point to be consistently maintained between 80 and 350°C. This is ideal for pre-heating welding workpieces, interference-fitting or paint stripping.



#### **Timing control**

The latest generation of POWERDUCTION machines (V4) come with a new «Timer» feature. This function means that the heating time can be precisely adjusted (from anywhere between 1 - 30 seconds) to achieve the right level of accuracy (excluding the 37 LG).



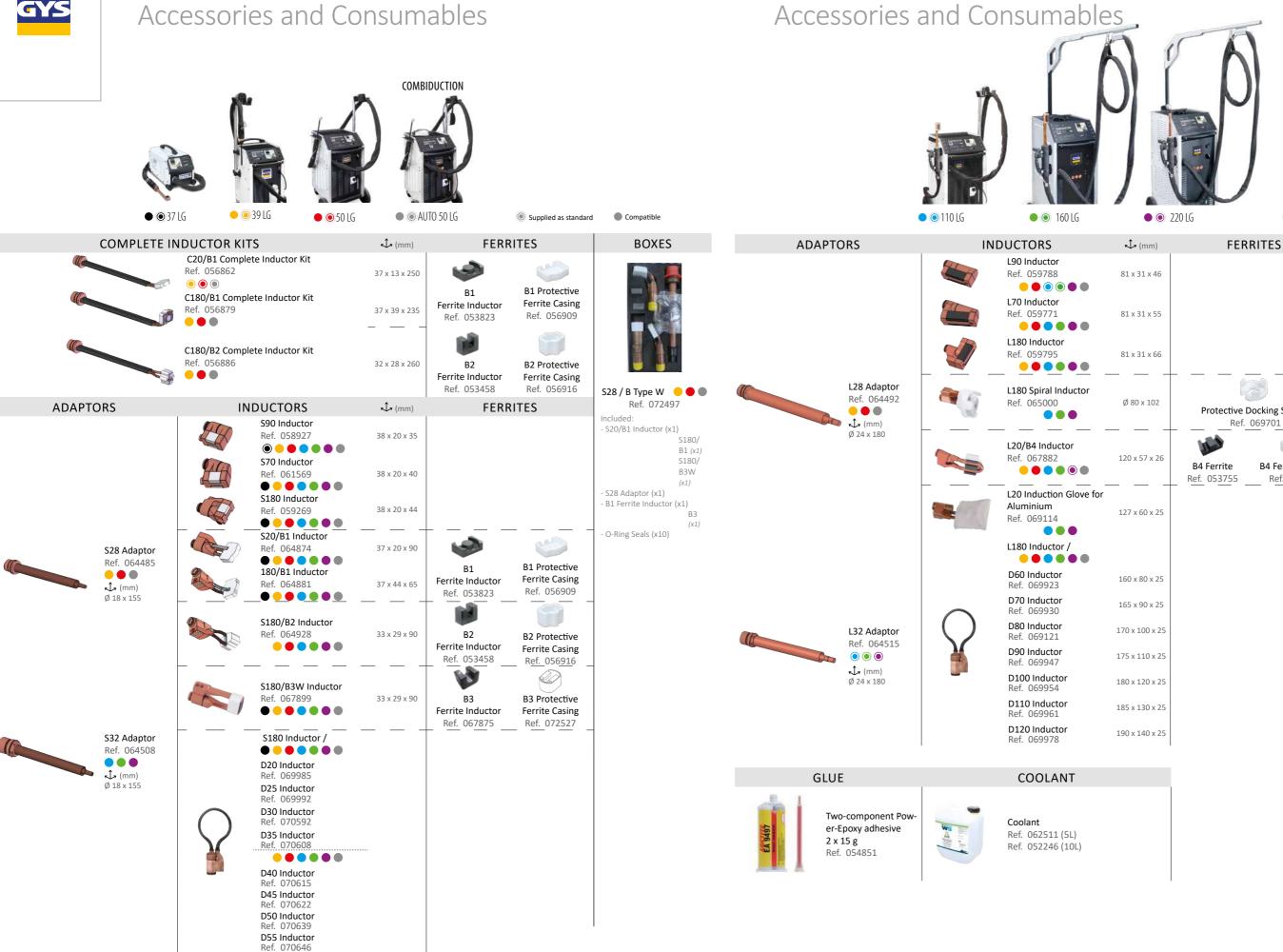
#### Induction heating specially tailored to your inductor and welding material

The POWERDUCTION range responds differently depending on the type of inductor being used and the material being heated. It provides an optimal heating power adapted specifically to each situation.



## Compatibility Accessories and Consumables

## Compatibility



Supplied as standard

Ø 80 x 102       Protective Docking Station Ref. 069701         120 x 57 x 26       W         B4 Ferrite Ref. 053755       B4 Ferrite Casing Ref. 054844         127 x 60 x 25       B4 Ferrite 053755         160 x 80 x 25       S32 / B Type W         160 x 80 x 25       -         175 x 110 x 25       -         185 x 130 x 25       -         185 x 130 x 25       -         190 x 140 x 25       -         190 x 140 x 25       -	81 x 31 x 46 81 x 31 x 55 81 x 31 x 66		
120 x 57 x 26	Ø 80 x 102		Ref. 072503
127 x 60 x 25       - B1 Ferrite Inductor (x1) B3 (x1)         160 x 80 x 25       - O-Ring Seals (x10)         165 x 90 x 25       -         170 x 100 x 25       -         180 x 120 x 25       -         185 x 130 x 25       -         185 x 130 x 25       -         190 x 140 x 25       -	120 x 57 x 26	-	S180/ B1 (x1) S180/ B3W (x1)
165 x 90 x 25       Image: Constraint of the second of the	127 x 60 x 25		- B1 Ferrite Inductor (x1) B3 (x1)
180 x 120 x 25     Ref. 065796       185 x 130 x 25     Included: - L70 Inductor (x1)       190 x 140 x 25     L180 (x1)	165 x 90 x 25 170 x 100 x 25		
190 x 140 x 25 Included: - L70 Inductor (x1) L180 (x1)			
			- L70 Inductor (x1) L180 <i>(x1)</i>



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Created in 1964, GYS is a French family group with 730 employees worldwide. With its research centre, GYS is a leading player in the design and manufacturing of welding, battery charging and car-body repair equipment. GYS France 1 rue de la Croix des Landes CS 54159 53941 Saint-Berthevin Cedex Fax : (+33) 2 43 68 35 21 www.gys.fr / E-mail : contact@gys.fr

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