

Lincoln Electric

## ADVANTAGE

- ▶ **Robust**  
built for heavy environmental conditions.
- ▶ **Soft and crisp mode**  
multiple arc modes for different electrode types.
- ▶ **Auto-adaptative arc force**  
Standard in Soft and Crisp modes the automatic variable Arc Force operates when it's required.
- ▶ **Adjustable hot start control**  
allows a smooth start /restart of the electrode.
- ▶ **Adjustable arc force control**  
manually adjusts the Arc Force to prevent sticking of the electrode in the weld pool.
- ▶ **Anti-stick**  
automatically decreases the current to minimum if by error the electrode sticks to the work piece at any time.
- ▶ **Built-in VRD**  
Factory fitted , built-in voltage Reduction Device (VRD) offers additional protection for the operator. The VRD reduces the OCV to a safer <20 volts, increasing operator safety when welding is performed in enviroments with increased hazard of electric shock.



THE LINCOLN ELECTRIC GREEN INITIATIVE  
Inverter Technology  
reduces energy demand



## Inverter<sup>®</sup> 270SX – 400SX



# Professional Welders for tough working conditions

The Inverter<sup>®</sup> 270SX and 400SX Stick and Lift TIG welders have been designed and manufactured to combine both a rugged industrial construction with excellent arc characteristics. Both machines are built to handle harsh environmental conditions using Lincoln tunnel technology to separate the PCBs and sensitive parts from contaminating cooling airflow. The robust metal case with large protective rubber corners makes these machines suitable for operation on site in conjunction with a generator, or within a workshop environment, providing maximum flexibility and durability.

Intensive and extensive testing in the Lincoln lab guarantees the quality of these welders.

Both units are equipped with features that will exceed the professional welder's expectations. The 270SX and 400SX have two weld modes: Soft and Crisp as well as Adjustable Hot Start, Auto Adaptive Arc Force and Lift TIG.

Arc Force prevents sticking and shorting of the electrode during welding. Both machines allow manual adjustment but in Crisp or Soft mode Auto Adaptive Arc Force is employed which adjusts the arc force automatically.

Equipped with Anti Stick as standard preventing the electrode sticking on contact with the work piece by automatically switching the current down to minimum, preventing overheating of the electrode and further damage to equipment.

The machines are equipped with digital meters which display the pre-settable welding current, actual welding current or voltage during welding. The optional remote control allows fine adjustments during welding and the high duty cycle of these machines supports continuous welding with a wide variety of electrode types.



IP testing in the Lincoln lab



Dust test



Final test of actual duty cycle, electrical safety, EMC

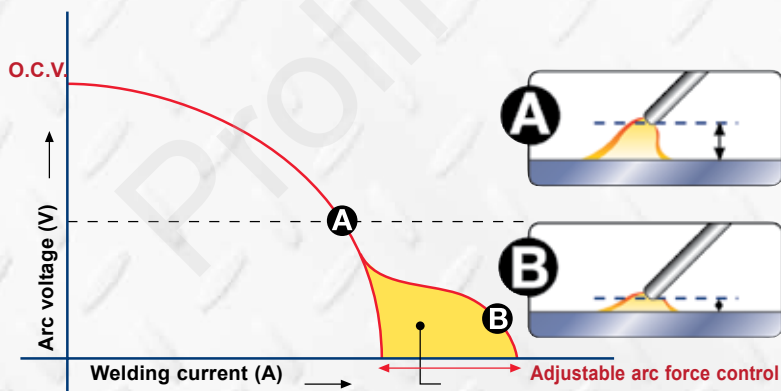
## TECHNICAL SPECIFICATIONS

Product	Item Number	Primary Voltage	Fuse Size	Weight (kg)	Dimensions HxWxD (mm)	Protection/ Insulation Class	Compliance
270SX	K12040-1	415V/3/50-60Hz +/-15%	20A	22	389 x 247 x 502	IP23 / H	EN60974-1 EN60974-10 CE ROHS
400SX	K12042-1		30A	36	455 x 301 x 632		

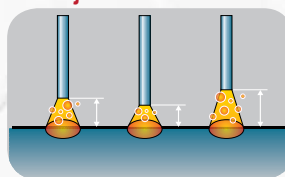
## WELDING OUTPUT

Product	Current range	Input power	Rated output (40°C)	O.C.V.
270SX	5-270A	9.5kW @ 35% 6.3kW @ 100%	270A / 30.8V @ 35% 200A / 28V @ 100%	45Vdc
400SX	5-400A	10.9kW @ 35% 16.4kW @ 100%	400A / 36V @ 35% 300A / 32V @ 100%	

## AUTO ADAPTATIVE ARC FORCE

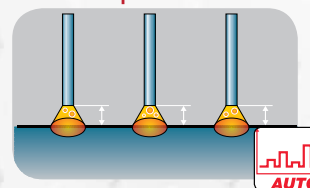


### Adjustable Arc Force



At the moment the Arc tended to short, the Amperage (B) increases to re-establish the Arc. The percentage extra weld current is adjustable.

### Auto-adaptative Arc Force



The Arc voltage is measured continually to adapt the optimum value of Arc Force. This optimizes the Arc stability and minimizes spatter