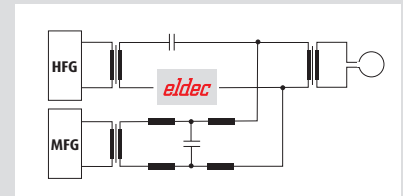




eldec SDF®: Patented circuit topology



eldec CUSTOM LINE SDF® Simultaneous dual frequency generators

Everything is possible:

Bespoken energy sources with single or multiple outputs and a wide range of power and frequency combinations.

eldec is well-known for its SDF® technology. Patented dual-frequency generators which can be operated simultaneously or separately with medium and high frequency.

Although SDF® generators are suitable for users looking for a generator with a switchable frequency, but who do not want to operate it with simultaneous frequency, they are often too expensive. We can now supply DF generators (dual-frequency generators) for these applications: Switchable dual-frequency generators with the product and service quality you expect from eldec

- Unique and patented worldwide – simultaneous heating with MF and HF
- Flexible use also as pure MF or HF energy source possible.
- Of particular benefit for the contour-true edge layer hardening of complex surface geometries.
- Device protection by robust IGBT transistor technology:
- High efficiency of over 90% in all power classes.
- Microprocessor-controlled high-speed eldec control print and PLC for control cycles in single-figure milliseconds.
- Precision energy dosing for high reproducibility and therefore excellent process capability (SPC).
- Maximum energy density => short process times.
- Combination of pulse width modulation and pulse package control.





eldec SDF® generators

eldec SDF® (simultaneous dual frequency) generators feature a high power density in simultaneous dual frequency technology.

Power: 50 – 3,000 kW

Frequency: 10 kHz – 25 kHz and 150 kHz – 350 kHz

eldec SDF® generators are supplied in an electrical cabinet

eldec SDF® generators are primarily integrated in complete hardening systems.

Please request our separate brochure for more information.

SDF® power 50 – 3,000 kW

Type / Rated capacity	Power connection + 10% 50/60 Hz		Required cooling water without inductor	Generator dimensions / weight		Coaxial/Output transformer dim.
	V	A		l/min	W x H x D mm	
SDF® 50	3 x 400	100	80	1000 x 2100 x 600	280	125 x 480
SDF® 75	3 x 400	250	100	1000 x 2100 x 600	300	370 x 350 x 500
SDF® 100	3 x 400	200	100	1000 x 2100 x 600	320	370 x 350 x 500
SDF® 150	3 x 400	300	150	1000 x 2100 x 600	350	370 x 350 x 500
SDF® 200	3 x 400	400	160	1100 x 1980 x 600	500	370 x 350 x 500
SDF® 300	3 x 400	600	180	1100 x 1980 x 600	700	370 x 350 x 500
SDF® 450	3 x 400	1000	200	2000 x 2000 x 1200	800	350 x 350 x 650
SDF® 800	3 x 400	1600	250	2000 x 2000 x 1200	1200	350 x 350 x 650
SDF® 1000	3 x 400	2000	350	2000 x 2000 x 1200	1500	350 x 350 x 650
SDF® 3000	3 x 400	6000	500	6000 x 2000 x 1200	3000	350 x 350 x 650

SDF® options

Profibus interface
 Profinet
 Ground fault monitor
 Energy controller
 Temperature control with pyrometer
 Current and voltage display

Coolant systems (to order)
 eldec generators are generally water-cooled as a result of their high power density. We can supply all our generators and systems with suitable passive or active coolant systems to order.

RFID (radio frequency identification) unit for inductor:
 Process monitoring is very important for induction hardening. For this reason, EMAG eldec induction GmbH has developed an RFID interface between the inductor and machine. The geometry and properties of the inductors used are important parameters which must be monitored during hardening processes. An RFID (radio frequency identification) system essentially comprises a read-write unit and a writeable chip. The read-write head is included in the inductor support while the chip is fitted in the inductor foot. Various data such as the number of heating cycles, equipment code, possible positioning instructions for the machine, flow values, information about repairs/modifications made, etc. can be saved. The interaction between the RFID system and the hardening machine therefore ensures the clear identification of the correct tool for the component and complete documentation of the properties and history of the inductor.



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