

**MFI-1****Short Information****Medium Frequency Inverters****Your Application**

You are looking for a medium frequency inverter for your resistance welding application.

**Your requirements**

You have to weld different metallic materials and/or coated sheets. Your application requires an optimal welding quality and high strength of the welded joints. The spots must be nearly invisible.

**Our answer**

The medium frequency inverter MFI-1 is a 1000 Hz DC power module with integrated constant current controller. In combination with the welding controllers Akzent 5000 or MTW 9000 the medium frequency technology offers you a huge range of solutions for your resistance welding applications even for unusable situations with a maximum of quality and reliability for your welding results.

All HIE medium frequency inverters have the following features:

- Chassis-form for easy installation in the control cabinet
- IGBT technology with integrated primary constant current control (1000 Hz)
- Analogue inputs for connection with SPC
- Ignition pulse input for connection of non HIE controllers
- Input for HIE welding controllers as Akzent SC 5000 or MTW 9000
- As Maxi-Version with integrated welding controller (16-programms, 8-sequences, 2 analogue outputs, stepper, counter), operation via terminal T-5000, I/O connections via interface board CAN-630
- I<sub>max</sub> from 400 A to 1900 A



Medium Frequency Inverter  
MFI-1

1000Hz Welding Transformer  
MFT-1



## System overview MFI-1 Maxi

### MFI-1 Maxi with integrated primary constant current control



Medium frequency inverter  
**MFI-1**



Signal connector to thermo  
contact of the welding trans-  
former  
**VL-044/6 (6m)**



Welding transformer  
**MFT-1**



Data wire  
**VL-096/2 (2m)**



I/O Modul  
**CAN-630**



Data wire  
**VL-096/2 (2m)**



Operating terminal  
**T-5000**

## System overview MFI-1 Mini / Akzent 5000

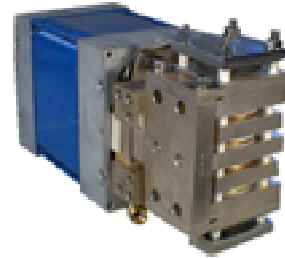
### MFI-1 Mini with HIE Welding Controller Akzent-5000



Medium frequency inverter **MFI-1**



Signal connector to thermo contact of the welding transformer **VL-044/6 (6m)**



Welding transformer **MFT-1**



Main supply cable **VL-104/03 (0,3m)**



Data wire **VL-105/03 (0,3m)**



**System Controller**  
SC-5000/QSP-MF



Network connection via  
ArcNet VL-052



Software  
SPV-5000



Data wire **VL-096/2 (2m)**



**Operating terminal**  
T-5000

## System overview MFI-1 Mini / MTW 9000

### MFI-1 Mini with HIE Welding Controller MTW-9000



Medium frequency inverter **MFI-1**



Signal connector to thermo contact of the welding transformer **VL-044/6 (6m)**



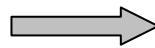
Welding transformer **MFT-1**



Data wire **VL-028/2 (2m)**



Welding controller **MFS-9000**



Network connection via RS 422 or RS 232

Software **SPV-9000**



Connection board **AU-057/0,5 (0,5m)**  
I/O connections

# Technical Specifications

Type	MFI-1/040W...	MFI-1/064W...	MFI-1/088W...	MFI-1/120W...	MFI-1/160W...	MFI-1/190W...
max. output current (bei 20% ED, Tc = 25°C *)	400 A	640 A	880 A	1200 A	1600 A	1900 A
rated output ** at:						
50% on periode	75 kVA	110 kVA	130 kVA	150 kVA	200 kVA	230 kVA
20% on periode	110 kVA	180 kVA	200 kVA	240 kVA	300 kVA	350 kVA
main voltage	3-phase, 400 V~(+10 / -15%), 50/60HZ					
output	500 V, 1000Hz					
primary constant-current control	X	X	X	X	X	X
cooling	water min. 4 l/min. / max. 35°C / max. 6 L / 4 bar max. 6 bar					
storage	remove the water completely out of the cooling system!					
environmental temperature	1 - 45°C ( up to 2000m over zero, wet class F )					
DIN 40040	dew fall on the IGBT- und Diodes modules is not permitted					
VDE 0113						
protection rating DIN 40050	IP 20					
installation	switch cabinet IP 54 vertically on mounting plate / backside of the switch cabinet					
weight (kg)	14,0	14,0	14,0	22,0	22,0	22,0
dimensions (mm)	width (w)	255	255	255	255	255
	height (h)	395	395	395	550	550
	depth (d)	225	225	225	285	285
	A	210	210	210	210	210
	B	365	365	365	530	530
	fixing holes	M8	M8	M8	M8	M8

drawing nr.: A39-I621-V0-X4

\* Tc = heat sinks temperature

\*\* ED = on periode for integration time of 1000 ms

please ask for lower or higher output current



HIE SCHWEISS-SYSTEME GmbH, Zunftstr. 12, D-21244 Buchholz/Nordh.  
Tel.: [+49] 4181/9335-0, Fax.: [+49] 4181/9335-49 E-mail: info@hie-gmbh.de, Internet: www.hie-gmbh.de