

HV-DC SOURCE

70KV/1mA AND 100KV/500µA SERIES HVDC

The HVDC-Series represent High Voltage Sources with variable output voltage and current and Arc-Counter

The HVDC Series has been specially developed for

- Destruction free high voltage testing
- HV-DC sourcing in scientific and industrial applications
- HV-Conditioning

of electronic components and systems, especially for vacuum devices.

Furthermore the HVDC-Series is applied for accurately controlled operation of

- Electrostatic Filter systems and
- Flocking applications

if special requirements for the manufacturing quality under such processes are given.



SPECIAL APPLICATION:

HIGH VOLTAGE CONDITIONING

Vacuum components tend to lose vacuum while being stored unfortunately. By this effect longer stored components (starting from 3 months stocking period) face an exponential risk to fail in the start up moment. Arcs inside during the first start often destroy the unused component totally as well as the surrounding electronics.

For this reason RF Power Grid Tubes, Vacuum Capacitors and similar Vacuum Products, representing a considerable value besides the system itself, are high voltage tested and conditioned at site in many applications.

This is common for Shortwave and TV Broadcast Stations and lately more frequently in Industrial RF Generators (Pipe Welders, RF Dryers, aso.) as well.

Based on the extensive high voltage experience for production of Vacuum Capacitors and RF tubes Powersources Germany developed a totally new generation of High Voltage Test Systems. This is based on new HV DC processing algorithms not applied in manufacturing so far.

While high volume, heavy weight and expensive AC test systems were applied in the past for HV conditioning, the HVDC-Series features a fully mobile test and conditioning method now which is more accurate, less expensive and provides significantly more safety for the operator.

The system weight of **13kg** only assure **unlimited Mobile Service** in any application.

The HVDC-Series is applied in production, HV testing and Service of a variety of electronic components in High voltage and Radio Frequency:

- Vacuum Capacitors
- Ceramic Capacitors (Disk-, Barrel, Doorknob and other styles)
- Foil Capacitors
- Air Variable Capacitors
- SF₆-Capacitors
- High Frequency RF Tubes
- Rectifiers
- Switching tubes and devices
- Vacuum Relays and Contactors
- Audio tubes
- Active and passive high voltage components of all types

Based on the newly developed testing criteria and method the operator protect and safety is considerably improved compared to the AC Sources under operation now.

- No more X-Ray emission
- Low energy output with ultrafast HV trip off assures non destructive testing of the components
- A direct stroke of the operator is not pleasant but not killing any more

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TECHNICAL DATA

Mains In:	115V / 50-60Hz or 230V / 50-60Hz
High Voltage Out:	
HVDC-100K05MP:	0-100kV / 0-500µA pos. HV-Out
HVDC-70K1MP:	0-70kV / 0-1000µA pos. HV-Out
HVDC-100K05MN:	0-100kV / 0-500µA neg. HV-Out
HVDC-70K1MN:	0-70kV / 0-1000µA neg. HV-Out
Pulse Operation:	
Flange:	x1: 0.3 – 30Sek. x10: 1 – 300Sek.
Pulswidth:	2 – 18Sek.
Pulspause:	2 – 18Sek.
Arc-Detection:	Sensitivity adjustable
Arc-Trip Off:	depending on operation mode
Overload-Reset:	manually / automatic selectable
Reset-Delay:	1 – 6 Sec. adjustable
Arc-Energy:	

Operation Modes:	
CC: Constant Current	Resolving U/I-Regulation Trip of with overcurrent and arc
Burn:	Resolving U/I-Regulation similar to CC but no Arc Trip Off (HV Conditioning-Mode High Speed)
CV: Constant Voltage	U-Regulation Trip of with overcurrent and arc
Overload Protection:	Semicons thermally protected
Connectors:	IEC-Connector with mains Fuse Interlock HV-Out (with 1.5m HV cable, shielded) Remote Control Panel Interface
Dimensions:	ca. B300 x H210 x T430 mm
Weight:	ca. 12.8kg
Options:	HV-cable length on request Remote Control Panel



OPTIONS:

HV-Cable:	to customer request
FB	Remote Control Panel
Rack	19"-Rack-Module
BAG	Trolley for transport / Protection Bag