

# 700-DI Series AC Dielectric Test Sets

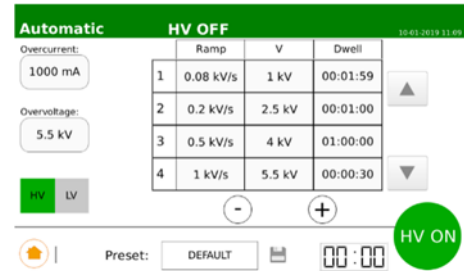
High Voltage AC Test Systems – 2-100kVA

The HIPOTRONICS standard line of AC Dielectric Test Systems are designed to perform high voltage AC tests on electrical apparatus in accordance with IEC60, IEEE 4 and IEC 270 and other national test standards. A variety of mechanical configurations are available to suit different installation conditions. Some models can be supplied in mobile versions when it is difficult to move the test object to the test area.

AC Dielectric Test Sets are available in a wide range of voltage and power ratings with exceptional reliability, durability and functionality. No matter what your requirement, HIPOTRONICS has an affordably priced, highly reliable test solution to meet your needs.



*\*Pictures are for reference only and may not reflect final design*



## FEATURES

- Microprocessor controller** provides better regulation accuracy and measuring accuracy
- Continuously adjustable test output voltage**
- SIL3 Compatible**
- Designed** to operate from 0.5% to 100% of the maximum rated output voltage
- Easily accessible** meter recalibration
- Adjustable Overload** from 10% to 110% of rated current output
- Backup Breaker** overload safety situation
- Output Connected** voltmeter and ammeter
- Zero start interlock** ensures that the voltage control is at a minimum before HV can be energized
- Rated current** available from zero to rated voltage

## BENEFITS

- Simple to Use** with minimal amount of setup time and intuitive control panel allows for simple testing
- Surge-compensated** HV transformer windings for withstanding flashovers at full voltage
- Output Connected Meters** ensures for fast and accurate readings
- Surge and Transient Protection** on all meters, transformers, etc.
- Partial Discharge Testing** allows for low PD levels available at full output voltage (PD level needs to be specified when ordering and may require additional components)

## APPLICATIONS

- Transformers
- Bushings
- Connectors
- Capacitors
- Switchgear
- Arrestors
- Instrument Transformers
- Sample Cable Lengths
- Rotating Machines
- Insulating Materials
- Transmission Line Hardware
- HV Components

## TECHNICAL SPECIFICATIONS

<b>Voltage Output Range</b>	0.5-100% of F.S.
<b>Voltage &amp; Current Measurement Accuracy</b>	± 1.5% of Reading ± 0.2% F.S
<b>Measurement Resolution</b>	0.01kV, 0.01mA
<b>Ramp Rate Accuracy</b>	+/- 5%
<b>Step Resolution</b>	0.5% of Full Scale
<b>PD Baseline</b>	≤20pC up to full voltage for oil insulated transformers

*Notes: The PD level is inherent to the equipment itself without considering possible external radiated interference from the customer's dedicated mains power supply or ground noise.*

	2kVA Power Rating				
Parameter	705-2	710-2	715-2	730-2	750-2
<b>Input Voltage</b>	90-264VAC, 50/60Hz				
<b>Max Output Voltage</b>	5kV	10kV	15kV	30kV	50kV
<b>Max Output Current</b>	400mA	200mA	133mA	66mA	40mA
<b>Output Connection</b>					
All-in-One Cabinet	Shielded Cable Output			n/a	
Separate Components	Bushing			Epoxy Output Bushing	
<b>Duty Cycle</b>					
All-in-One Cabinet	15min ON / 45min OFF, 6x/day			n/a	
Separate Components	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current				
<b>Controller Dimensions (W x H x D)</b>					
All-in-One Cabinet	22" x 21" x 26" (546 x 510 x 660mm)			n/a	
Separate Components	16.60" x 7.75" x 20.5" (422 x 197 x 520.7mm)				
<b>Controller Weight (Net)</b>					
All-in-One Cabinet	130lbs (59kg)			n/a	
Separate Components	35lbs (16kg)				
<b>HV Source Dimensions (W x H x D)</b>					
All-in-One Cabinet	In Control / Regulator Section			n/a	
Separate Components	20.50" x 29.25" x 25.0" (521 x 743 x 635mm)			20.50" x 25.00" x 31.00" (521 x 743 x 787mm)	
<b>HV Weight (Net)</b>					
All-in-One Cabinet	In Control / Regulator Section			n/a	
Separate Components	400lbs (181kg)			425lbs (193kg)	450lbs (204kg)

	5kVA Power Rating				
Parameter	705-5	715-5	730-5	775-5	7100-5
<b>Input Voltage</b>	200-264VAC, 50/60Hz				
<b>Max Output Voltage</b>	5kV	15kV	30kV	75kV	100kV
<b>Max Output Current</b>	1000mA	333mA	166mA	66mA	50mA
<b>Output Connection</b>					
All-in-One Cabinet	Shielded Cable Output			n/a	
Separate Components	Epoxy Output Bushing				
<b>Duty Cycle</b>					
All-in-One Cabinet	15min ON / 45min OFF, 6x/day			n/a	
Separate Components	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current				
<b>Controller Dimensions (W x H x D)</b>					
All-in-One Cabinet	21.5" x 25.5" x 26.0" (546 x 510 x 660mm)			n/a	
Separate Components	16.60" x 7.75" x 20.5" (422 x 197 x 520.7mm)				
<b>Controller Weight (Net)</b>					
All-in-One Cabinet	165lbs (75kg)			n/a	
Separate Components	35lbs (16kg)				
<b>HV Source Dimensions (W x H x D)</b>					
All-in-One Cabinet	In Control / Regulator Section			n/a	
Separate Components	20.50" x 25" x 29.25" (521 x 635 x 743mm)			25" x 34" x 38" (635 x 864 x 965mm)	25" x 37" x 46.5" (635 x 940 x 1181mm)
<b>HV Weight (Net)</b>					
All-in-One Cabinet	In Control / Regulator Section			n/a	
Separate Components	425lbs (193kb)	450lbs (205kg)	500lbs (227kg)	660lbs (299kg)	860lbs (390kg)

	<b>10kVA Power Rating</b>				
Parameter	705-10	715-10	730-10	775-10	7100-10
Input Voltage	230V, 50/60Hz. Other Inputs Available. Consult Factory.				
Max Output Voltage	5kV	15kV	30kV	75kV	100kV
Max Output Current	2000mA	666mA	333mA	133mA	100mA
Output Connection	Shielded Cable Output		Epoxy Output Bushing		
Duty Cycle	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current				
Controller Dimensions (W x H x D)	22.75" x 47" x 26.25" (578 x 1194 x 667mm)				
Controller Weight (Net)	600lbs (272kg)		400lbs (181kg)		
HV Source Dimensions (W x H x D)	In Control / Regulator Section		20.50" x 25" x 29.25" (521 x 635 x 743mm)	25" x 37" x 40" (635 x 940 x 1016mm)	25" x 37" x 47" (635 x 940 x 1193mm)
HV Weight (Net)	In Control / Regulator Section		500lbs (227kg)	860lbs (390kg)	900lbs (408kg)

	<b>20kVA Power Rating</b>				
Parameter	705-20	715-20	730-20	775-20	7100-20
Input Voltage	480V, single phase, 60Hz; 380V, single phase, 50Hz. Other Inputs Available. Consult Factory.				
Max Output Voltage	5kV	15kV	30kV	75kV	100kV
Max Output Current	4000mA	1333mA	666mA	266mA	200mA
Output Connection	Shielded Cable Output		Epoxy Output Bushing		
Duty Cycle	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current				
Controller Dimensions (W x H x D)	25" x 54" x 30" (635 x 1372 x 762mm)				
Controller Weight (Net)	700lbs (318kg)		300lbs (136kg)		
HV Source Dimensions (W x H x D)	In Control / Regulator Section		25" x 38" x 37" 635 x 965 x 940mm)	25" x 37" x 40" (635 x 940 x 1016mm)	25" x 37" x 47" (635 x 940 x 1194mm)
HV Weight (Net)	In Control / Regulator Section		900lbs (409kg)	950lbs (432kg)	1300lbs (591kg)

	<b>40kVA Power Rating</b>				
Parameter	705-40	715-40	720-40	750-40	7100-40
Input Voltage	480V, single phase, 60Hz; 380V, single phase, 50Hz. Other Inputs Available. Consult Factory.				
Max Output Voltage	5kV	15kV	20kV	50kV	100kV
Max Output Current	8000mA	2666mA	2000mA	800mA	400mA
Output Connection	Shielded Cable Output		Epoxy Output Bushing		
Duty Cycle	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current				
Controller Dimensions (W x H x D)	30" x 75" x 48" (762 x 1905 x 1219mm)		30.25" x 60" x 31" (768 x 1524 x 787mm)		
Controller Weight (Net)	1400lbs (635kg)		450lbs (204kg)		
HV Source Dimensions (W x H x D)	In Control / Regulator Section		25" x 37" x 38" (635 x 940 x 965mm)		30.5" x 40" x 55.5" (775 x 1016 x 1410mm)
HV Weight (Net)	In Control / Regulator Section		925lbs (420kg)	Net 1450lbs (658kg)	1800lbs (816kg)

	<b>60kVA Power Rating</b>				
Parameter	705-60	720-60	760-60	7100-60	
Input Voltage	480V, single phase, 60Hz; 380V, single phase, 50Hz. Other Inputs Available. Consult Factory.				
Max Output Voltage	5kV	20kV	60kV	100kV	
Max Output Current	12000mA	3000mA	1000mA	600mA	
Output Connection	Shielded Cable Output		Epoxy Output Bushing		
Duty Cycle	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current				
Controller Dimensions (W x H x D)	30" x 75" x 48" (762 x 1905 x 1219mm)		30.25" x 75" x 31" (768 x 1905 x 787mm)		
Controller Weight (Net)	1800lbs (816kg)		800lbs (363kg)		
HV Source Dimensions (W x H x D)	In Control / Regulator Section		30.5" x 38" x 41" (775 x 965 x 1041mm)	30.5" x 40" x 46" (775 x 1016 x 1168mm)	36.5" x 48" x 55.5" (927 x 1219 x 1410mm)
HV Weight (Net)	In Control / Regulator Section		1400lbs (635 kg)	1925lbs (873 kg)	2600lbs (11795 kg)

	100kVA Power Rating			
Parameter	720-100	750-100	775-100	7100-100
<b>Input Voltage</b>	480V, single phase, 60Hz; 380V, single phase, 50Hz. Other Inputs Available. Consult Factory.			
<b>Max Output Voltage</b>	20kV AC	50kV AC	75kV AC	100kV AC
<b>Max Output Current</b>	5000mA	2000mA	1333mA	1000mA
<b>Output Connection</b>	Epoxy Output Bushing			
<b>Duty Cycle</b>	1hr ON / 1hr OFF, 6x/day or Continuous @ 90% rated voltage, and 75% rated current			
<b>Controller Dimensions (W x H x D)</b>	30" x 73.5" x 48" (762 x 1867 x 1219mm)			
<b>Controller Weight (Net)</b>	1400lbs (636 kg)			
<b>HV Source Dimensions (W x H x D)</b>	30" x 39" x 40" (762 x 991 x 1016mm)	30" x 40" x 40" (762 x 1016 x 1016mm)	30" x 50" x 57.5" 762 x 1270x 1461mm	34" x 45" x 58" 864 x 1143 x 1473mm
<b>HV Weight (Net)</b>	2600lbs (1182 kg)	2800lbs (1273 kg)	2900lbs (1315 kg)	3100lbs (1409 kg)

*Note: Dimensions and weights are approximate and are subject to change.*

*\* Other output ratings available; consult factory with your requirements.*

	Electronic Devices		High Voltage Equipment	
	Temperature	Humidity (r.h. non-condensing)	Temperature	Humidity (r.h. non-condensing)
<b>Operation</b>	+5°C ... +40°C	5...95%	-10°C ...+45°C	5...90%
<b>Storage</b>	-20°C ... +70°C	5...95%	-10°C ...+55°C	5...90%

<b>ECCN</b>	3A992.A
<b>HTS US</b>	9030.39.0100

## SCOPE OF SUPPLY

Embedded controller  
 Regulator  
 HV transformer  
 HV warning lamp  
 Manual, test report, and calibration certificate

## CUSTOMER SUPPLIED

Input & output regulator power cables  
 High voltage output connection to test object  
 Grounding materials

## STANDARD OPTIONS

**HHDA13-280** – 120kV rated grounding stick  
**CF** – ≤2pC PD specification  
**DI-REM-SFTW** – Remote control Software with external E-stop button  
**DI-FO** – Fiber optic connection to computer (customer supplied)  
**GND Braid** – Grounding material  
**HH-700-HS** – Hand operated interlock switch  
**HH-700-FS** – Foot operated interlock switch  
**Casters** – Set of casters for regulator & HV tank (if applicable)