

# SYSTEMS AND COMPONENTS FOR CABLE TESTING

- Routine tests
- Type and sample tests
- PQ tests
- On-site tests

# TEST SYSTEMS FOR CABLE TESTING

**HIGHVOLT OFFERS ALL NECESSARY TEST SYSTEMS AND COMPONENTS FOR MV, HV AND EHV CABLE TESTING**



**ROUTINE TESTING**



**TYPE AND SAMPLE TESTING**



**PQ TESTING**



**ON-SITE TESTING**



Test Systems			Land Cables				Submarine Cables		Accessories			
			MV AC	HV AC	EHV AC	DC	AC	DC	Shielded room	Tan-delta measuring	PD-measuring	Water end termination CETS

AC	WR/WRU	++	++		+	+	+	●	●	●	●	
	WRM		++	++	+	+	+	●	●	●	●	
	WRV T HV		+	+	+	++	+	●	●	●	●	
	WRV T MV	+						●	●	●	●	
	DC	GP/FGP				++		++	●		●	●
		GPM				++		++	●		●	●

AC	WP	++	++	++	+	++	+	●	●	●	●
	WR/WRU	++	++		+	++	+	●	●	●	●
	WRM		++	++	+	++	+	●	●	●	●
DC	GP/FGP				++		++	●		●	●
	GPM				++		++	●		●	●
High current	HCTS	++	++	++	++	++	++	●			●
Impulse voltage	IP	++	++	++	++	++	++	●			●

AC	WP	+	++	++		++				○	
	WR/WRU	+	++		+	++	+			○	
	WRM		++	++		++				○	
	WRV T HV		++	++		++				○	
DC	GP/FGP				++		++			○	
	GPM				++		++			○	
High current	HCTS	++	++	++	++	++	++				
Impulse voltage	IP		++	++	++	++	++				

AC	WRV T HV	+	++	++		++			○	○	
	WRV T MV	++							○	○	
	WRV M		+	+					○	○	
DC	GPM				++		++				

HIGHVOLT test systems enable cable testing according to all relevant standards: IEC, Cigre, GOST, IEEE ...

- ++ Ideal
- + Suitable
- Suitable and necessary according to IEC standards
- Suitable but not required according to IEC standards

# AC HIGH VOLTAGE TEST SYSTEMS

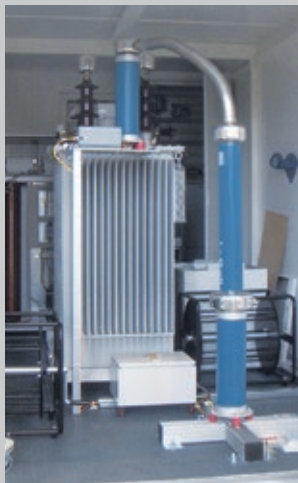


## AC TEST SYSTEM

TRANSFORMER BASED

- Type: WP
- Voltage range: 60 to 1800 kV
- Frequency range: 50/60 Hz

BEST FOR PREQUALIFICATION  
TESTING OF MV, HV  
AND EHV CABLE SAMPLES



## AC RESONANT TEST SYSTEM WITH VARIABLE INDUCTANCE

TANK TYPE

- Type: WR/WRU
- Voltage range: 20 to 350 kV
- Frequency range: 50/60 Hz

BEST FOR ROUTINE TESTING OF MV  
AND HV CABLE DELIVERY LENGTHS



## AC RESONANT TEST SYSTEM WITH VARIABLE INDUCTANCE

MODULAR TYPE

- Type: WRM
- Voltage range: 250 to 1200 kV
- Frequency range: 50/60 Hz

BEST FOR ROUTINE TESTING OF HV  
AND EHV CABLE DELIVERY LENGTHS



## AC RESONANT TEST SYSTEM WITH VARIABLE FREQUENCY

### MODULAR TYPE

- Type: WRV M
- Voltage range: 160 to 800\* kV  
\* with series connection
- Frequency range: 20 to 300 Hz

BEST FOR ON-SITE TESTING OF SHORT CABLE SYSTEMS



## AC RESONANT TEST SYSTEM WITH VARIABLE FREQUENCY

### TANK TYPE

- Type: WRV T HV
- Voltage range: 50 to 520\* kV  
\* with series connection
- Frequency range: 20 to 300 Hz

BEST FOR ON-SITE TESTING OF LONG CABLE SYSTEMS



## AC RESONANT TEST SYSTEM WITH VARIABLE FREQUENCY

### MODULAR TYPE

- Type: WRV T MV
- Voltage range: 6 to 50 kV
- Frequency range: 20 to 300 Hz

BEST FOR ON-SITE TESTING OF MV CABLE SYSTEMS

# DC HIGH VOLTAGE TEST SYSTEMS



## INDOOR DC TEST SYSTEM

### COLUMN TYPE

- Type: GP
- Voltage range: 300 to 2000 kV
- Current range: 50 to 10 mA

BEST FOR ROUTINE TESTING OF HV AND EHV CABLE DELIVERY LENGTHS



## OUTDOOR DC TEST SYSTEM

### COLUMN TYPE

- Type: FGP
- Voltage range: 300 to 2000 kV
- Current range: 50 to 10 mA

BEST FOR RESEARCH AND DEVELOPMENT, TYPE TESTING OF CABLE SAMPLES



## DC TEST SYSTEM & DISCHARGING UNIT

### MODULAR TYPE

- Type: GPM
- Stationary or mobile use
- Voltage measuring integrated into the modules
- Voltage range: 400 to 1600 kV
- Current range: 40 to 10 mA

BEST FOR ROUTINE TESTING OF DELIVERY LENGTHS AND ON-SITE TESTING OF CABLE SYSTEMS

# IMPULSE VOLTAGE AND AC HIGH CURRENT TEST SYSTEMS



## IMPULSE VOLTAGE TEST SYSTEM

MEDIUM SIZE

- Type: IP M
- Voltage range: 500 to 2400 kV

BEST FOR TYPE TESTING  
OF MV AND HV CABLE SAMPLES



## IMPULSE VOLTAGE TEST SYSTEM

LARGE SIZE

- Type: IP G
- Voltage range: 1000 to 6000 kV

BEST FOR TYPE AND PQ TESTING  
OF HV AND EHV CABLE SAMPLES



## HIGH CURRENT TEST SYSTEM

FOR HEAT CYCLE TESTS

- Type: HCTS
- Current range: 2000 to 7000 A

BEST FOR TYPE AND PQ TESTING  
OF MV, HV AND EHV CABLE SAMPLES

# ACCESSORIES AND SERVICES

## SHIELDED ROOM

- Available in all sizes
- Also available as wall mounted shielding in existing building



## WATER END TERMINATION SYSTEM

- Type: CETS
- For cable testing in the factory
- AC voltage range: 100 to 800 kV
- Lightning impulse voltage range: 250 to 1900 kV



## MEASURING SYSTEM

- Tan-delta measuring device  
Standard capacitors
- PD measuring system  
Coupling capacitor
- Fault Locator HiRES



## HIGHVOLT – YOUR SUPPLIER OF COMPLETE SOLUTIONS

- CONSULTANCY FOR TEST BAY LAYOUT
- TEST SYSTEMS AND ACCESSORIES
- TUTORIALS AND TRAININGS
- DAKKS CALIBRATION SERVICE
- UPGRADES OF EXISTING TEST SYSTEMS

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