



## HTXZ(L) Power Frequency Series Resonant Test System



### Product Introduction

With the development of power system, the capacity of running equipment is increasing. For example, Thermal generator group, the single capacity has exceeded 1000MW, and hydrodynamo group, the maximum capacity has reached 800MW. If traditional test equipment (power frequency test transformer) is used for the ac power frequency withstand Voltage test of these devices, the regulator is very bulky because of the large test capacity required, and the high-capacity test power supply is difficult to solve in the field, so the field test is extremely inconvenient. The Power frequency withstand voltage tester host, no matter from test Power supply capacity, equipment weight, the waveform and has advantages in such aspects as investment. The Power frequency withstand voltage tester host focuses on the potential of capacity of 250 mw and below hydrodynamo ac withstand voltage test of the design and manufacture.

### Product Parameters

Rated output voltage	0 ~ 60kV(AC RMS) and below
output frequency	50Hz

Resonance voltage waveform	Pure sine wave, waveform distortion rate $\leq 1\%$
Work system	Full power conticontrol consolenuous working time of 1min
quality factor	10~40
Maximum test capacity	3000kVA and below
Working power supply	380V $\pm 15\%$ 、Power frequency 50Hz

Product model	control console	Voltage regulator	reactor(dry)	Excitation transformer(dry)	Voltage divider	Scope of application
HTXZ(L)-200kVA/25kV	30kW	30kVA(electric)	200kVA/25kV Adjustable one	30kVA dry	30kV	hydrodynamo.0.4 ~ 1.0 $\mu$ F.(10kV/40MW)
HTXZ(L)-300kVA/50kV	60kW	60kVA(electric)	300kVA/50kV Adjustable one	60kVA oil-immersed	50kV	Thermal generator.0.27 ~ 0.33 $\mu$ F.(20kV/300MW)
HTXZ(L)-600kVA/50kV	60kW	60kVA(electric)	200kVA/50kV Adjustable one 400kVA/50kV Adjustable one	60kVA oil-immersed	50kV	Thermal generator.0.113 ~ 0.45 $\mu$ F.(20kV/600MW)
HTXZ(L)-1200kVA/50kV	120kW	120kVA(induction)	200kVA/50kV Fixed two 800kVA/50kV Adjustable one	120kVA oil-immersed	50kV	hydrodynamo.0.6 ~ 1.8 $\mu$ F.(20kV/250MW)
HTXZ(L)-2750kVA/55kV	300kW	300kVA(induction)	750kVA/55kV Fixed two 1250kVA/55kV Adjustable one	120kVA oil-immersed	60kV	hydrodynamo.1.6 ~ 3.3 $\mu$ F.(20kV/770MW)

### Capacitance of the power system commonly used hydrodynamo reference table

hydrodynamo	Rated Capacity(WM)	rated voltage(kV)	Phase capacitor( $\mu$ F)
	72.5~85	10.5	0.694
	125~150	/	1.8~1.9
	300	15.75	1.7~2.5
	400	18.0	2~2.5
	600	/	2.1~2.5

### Product features

- 1、 Due to full compensation of resonant reactive power, the power of power supply and equipment is less than 1/10 of the required capacity of the subject ( $1/q10$ ); Small size and light weight with the same capacity, large output capacity of the device and small power capacity required for configuration, cheap, convenient and safe operation.
- 2、 Series resonance is actually a current filtering circuit, so that the current passing through the subject is basically the fundamental current, and the waveform distortion rate (THD) of the output voltage is very small, which is superior to all existing ac voltage withstand equipment.
- 3、 The short circuit current of the sample after flashover or breakdown is only less than 1/10 ( $1/Q$ ) of the test current before short circuit, which can effectively prevent the expansion of damage to the fault point after breakdown.
- 4、 After flashover, the arc will be automatically extinguished immediately. The long (number of seconds) process of restoring resonant state voltage after arc quenching is a steady-state establishment process, and there is no danger of voltage overshoot and no danger of restoring overvoltage in microsecond millisecond transient process.