

Cable Termination System

POWER
HIGH VOLTAGE TEST

Cable Termination System



The cable termination requirement is very high for testing 66kV or above XLPE cables.

Oil termination is to strengthen the insulation level of the dielectric and increase the field strength. But for 66kV or above 66kV XLPE cables, oil termination cannot meet the test requirements if only to increase the field strength; then we use water termination, the de-ionized water will make the electric field distribution average and meet the test requirement.

CTT cable test termination used for MV, HV and EHV insulation cable test. It can meet the relevant requirement and standard; this test termination can be used for the following test:

- AC voltage test
- Partial discharge test and fault location
- Impulse voltage test (lighting impulse and switching impulse)
- Dielectric loss test
- Breakdown test
- Some other relevant tests

CTT cable test termination suitable for 66-500kV cable test, the Max diameter can be up to 165mm.

It equipped with CTW water treatment unit; based on the voltage level, the cable termination has two designs: A) above 150kV, cable insert to the termination insulation tube from bottom B) below 150kV, cable insert to the termination insulation tube from top.

CTT cable test termination is a double water tube system, de-ionized water is recycling inside. It is a closed water treatment system together with the water treatment unit CTW. Each cable connects to the water treatment unit through two water tubes.

Our cable termination structure design has changed the cable's electric field distribution and energy loss in the termination. The water treatment unit can control water's electrical conductivity and temperature.

Water treatment unit equipped with 500L water tank that for de-ionized water; two cable terminations and water treatment unit connected by four water tubes. Water flow rate is about 30 L / min or 60 L / min. Heat discharged to the outside through the heat exchanger.

Water treatment device

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CWD series de-ionized purifying water devices take the intelligent control system and user-friendly design; they make the system more stable and easier to maintain. This set of device equipped with cooling unit that used to distribute the heat produced during the test, and maintain pure water conductivity that meet test requirements.

Advantages

- Tube connection takes the quick connector.
- Large capacity water tank
- Automatic conductivity control
- Convenient resin replacement
- All parts corrosion-resistant
- Radiator power 120kW
- Remote operation function
- Low noise

Technical parameters

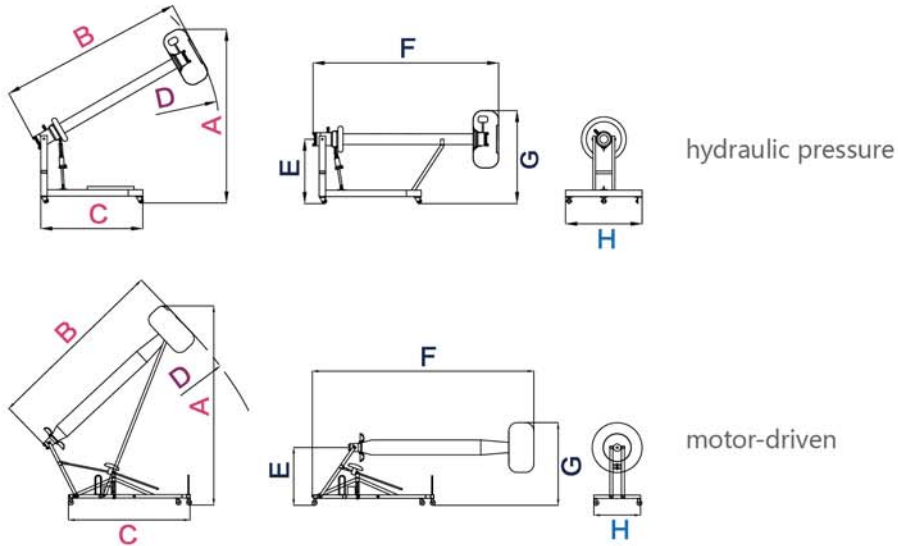
- Water tank capacity: 500L
- Water pressure: 4Bar
- Flow: 3000 or 4000L / h
- Maximum temperature (de-ionized water): 60 ° C
- Conductivity control range: 0.1 - 20 μ S/cm
- Maximum cooling capacity: 120kW
- Maximum ambient temperature: 35 ° C
- Minimum ambient temperature: 3 ° C
- Weight (not including water): 370kg
- Power supply: 50/60 Hz, 220 V / 16 A

Annex 1 Models of Water termination

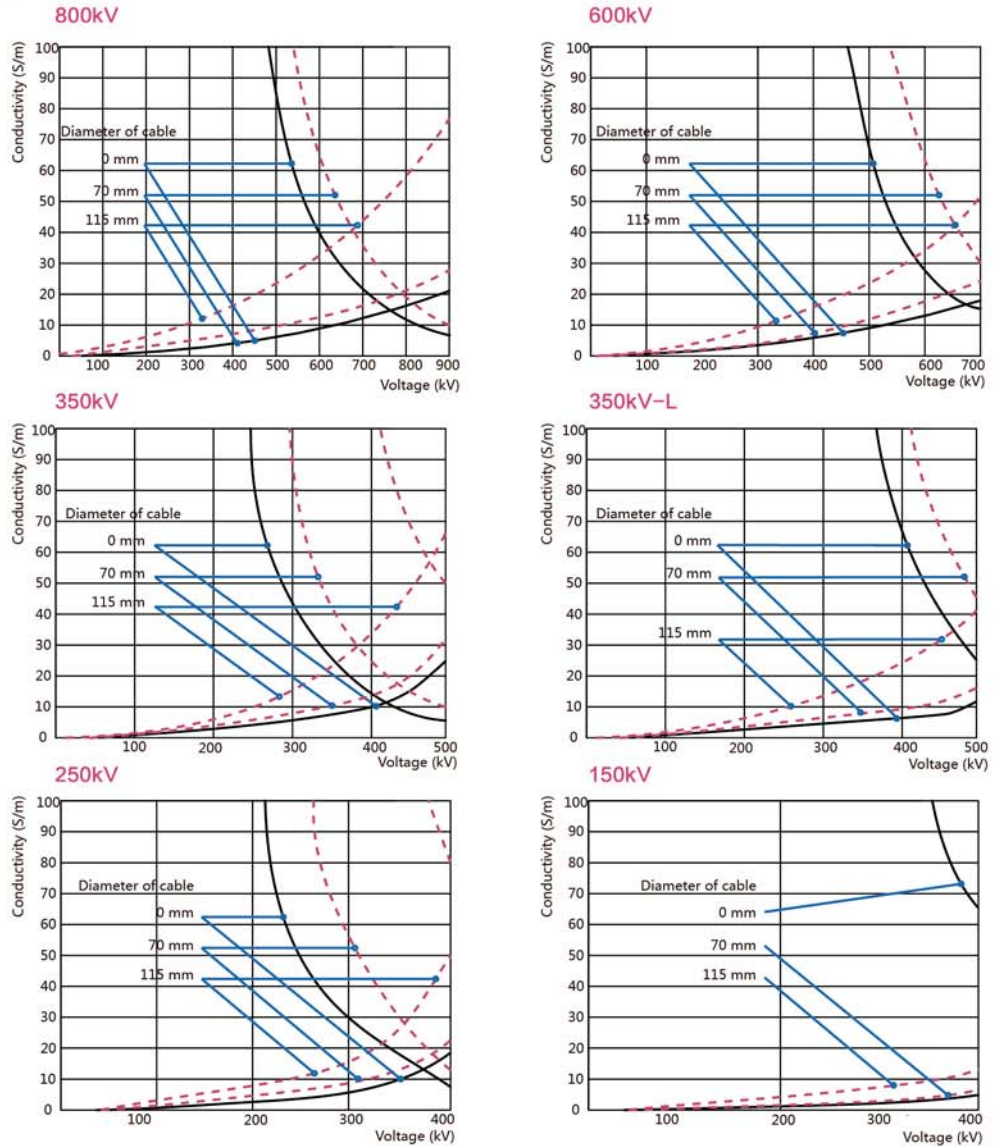
Model	Rated voltage		PD level		Cable diameter	Dimension								weight	Up/down	Water treatment
	AC	LI/SI	at Un	at 0.8 Un		A	B	C	D	E	F	G	H			
	kV	kV	pC	pC	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg	manual/auto	quantity
CTT 150-115	150	550 / -	≤ 2	≤ 1	115	1430	1000	1950	1375	1275	1000	1300	1200	205	hydraulic pressure	1
CTT 200-115	200	650 / -	≤ 2	≤ 1	115	1615	1250	2200	1800	1700	1000	1300	1200	230	hydraulic pressure	1
CTT 200-130	200	650 / -	≤ 2	≤ 1	130	1630	1300	2400	1800	1700	1100	1300	1200	280	hydraulic pressure	1
CTT 250-115	250	800 / -	≤ 2	≤ 1	115	2000	1500	2500	2200	2100	1100	1425	1200	250	hydraulic pressure	1
CTT 250-130	250	800 / -	≤ 2	≤ 1	130	2010	1500	2650	2200	2100	1100	1450	1200	325	hydraulic pressure	1
CTT 350-115	350	1100 / -	≤ 2	≤ 1	115	2350	1800	2900	2200	2100	1100	1500	1200	340	hydraulic pressure	1
CTT 350-130	350	1100 / -	≤ 2	≤ 1	130	2350	1800	3050	2600	2530	1100	1640	1200	370	hydraulic pressure	1
CTT 350-165	350	1100 / -	≤ 2	≤ 1	165	2350	1900	3200	2300	2400	1400	1800	2150	725	motor-driven	1
CTT 450-130	450	1200 / 900 *	≤ 2	≤ 1	130	3000	2200	3600	2600	3150	1400	1800	2150	750	motor-driven	1
CTT 450-165	450	1200 / 900 *	≤ 2	≤ 1	165	3000	2300	3900	2800	3150	1400	1800	2150	810	motor-driven	1
CTT 600-130	600	1700 / 1000 *	≤ 2	≤ 1	130	3600	2600	4300	3300	3700	1550	1940	2600	845	motor-driven	1
CTT 600-165	600	1700 / 1000 *	≤ 2	≤ 1	165	3600	2700	4400	3300	3700	1550	2200	2600	900	motor-driven	1
CTT 700-130	700	1800 / 1200 *	≤ 5	≤ 2	130	4550	3400	5000	3300	4600	1550	2200	2600	980	motor-driven	1
CTT 700-165	700	1800 / 1200 *	≤ 5	≤ 2	165	4650	3500	5450	3800	4700	1550	2600	2600	1030	motor-driven	1
CTT 800-165	800	1900 / 1300 *	≤ 5	≤ 2	165	5150	3900	5800	4300	5200	1805	2600	3000	1210	motor-driven	1

Rate frequency AC= 50/60Hz LI=1~5/50 μ s, pos/neg SI=250/2500 μ s, pos/neg *for SI please contact us	Cable diameter: the maximum diameter of the cable including the external semiconductor layer	Dimension: each terminal has a slight difference compared with the actual size	Weight: it is a single water termination' s weight(without water)
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Cable test termination outline drawings



Pure water conductivity and the cable-sectional diameter relationship form under the different voltage levels during test



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