山东七星高压电气有限公司

Shandong Qixing High-voltage Electrical Co. Ltd.

[QX-2017版]

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公司介绍 Company Profile

山东七星高压电气有限公司是注册在山东省临淄区，是一家股份制高新技术企业，通过引进国内外先进技术和人才，以研制和开发生产玻璃钢电容式变压器套管为主导产品的高新技术企业，专业生产12～550kV电压等级的（智能型）玻璃钢电容式变压器套管、油—SF_6变压器套管、油—油变压器套管、SF_6—空气套管、穿墙套管。该系列产品是采用环氧树脂浸玻璃纤维复合材料作内绝缘，硅橡胶伞裙作外绝缘，具有无油、无气、无瓷、防爆、环保、免维护、耐污闪能力强等诸多优点。公司自有的四项发明专利确保了产品具有安全可靠、便于安装等诸多优点，是传统油纸电容型套管的理想换代产品。企业已通过ISO9001：2008质量体系认证，产品已通过国家电力权威检测机构的检测认可，该产品满足GB/T4109–2008、IEC60137Ed.6.0,MOD及有关各项最新标准。

在山东省经贸委组织的新产品鉴定会上，得到专家们一致好评。 对员工用心 、对客户诚心 、对质量精心、对社会尽心是公司秉持的经营原则。脚踏实地 、全心全意为广大电力用户提供安全、可靠、优质的产品。

“人才铸就品质，客户成就品牌”，七星人用智慧、勤奋、激情搭建起走向成功的道路，用诚信铸就了企业的坚实历史，用实力开拓属于自己的天空。七星人有勇气和魄力去创造奇迹，在更新、更高的起点上实现新的跨越，为创建“百年七星”而努力。

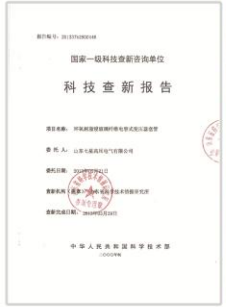
Registered in Linzi District, Zibo City, Shandong Province, Shandong Qixing High–Voltage Electrical Co. Ltd. is a new type of share holding high–tech enterprise. Through introducing advanced technology and high–tech talents from home and abroad, this company has developed into a high–tech company with the R&D as well as the manufacture of FRP capacitive transformer bushing as the leading products, which include (smart) FRP capacitive transformer bushing, oil–SF_6 transformer bushing, oil–oil transformer bushing, SF_6–air bushing, wall bushing from 12kv–550kv. In this series of products epoxy resin FRP is used for internal insulation and silicon rubber creepage extender is used for external insulation, both of which are without oil, without gas, without porcelain, and explosion–proof, environmentally friendly, maintenance–free and strongly contamination–resistant. Four patented inventions owned by the company ensure the safety, reliability and convenience in mounting. This series of products is an ideal replacement in upgrading the traditional oil–paper capacitive bushing. The company has passed the certification of ISO9001:2008 quality inspection system and the products have been tested and approved by the of national power inspection authority. The products have met the latest requirements in GB/T4109–2008 and IEC60137Ed.6.0, MOD.

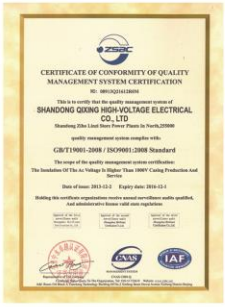
In the New Product Assessment Convention organized by the Economic and Trade Committee of Shandong Province, the products received unanimously favorable comment from the experts present. “Being humane to the employees, sincere to the customers, devoted to quality products and responsible for the society” is the business guideline that the company has been adhering to. With a down–to–earth attitude, we are wholeheartedly providing safe, reliable and quality products to all customers.

We believe that human resources are the molding power of quality and good faith among the customers cultivate a brand name. We Qixing People will pave the way to success with intelligence, diligence and devotion. With our honesty we’ll create our own history and with power we’ll open new frontiers. Qixing People have the courage and vigor we’ll work wonders and on a new starting line surpass our past and strive for the establishment of a “Centennial Qixing!”

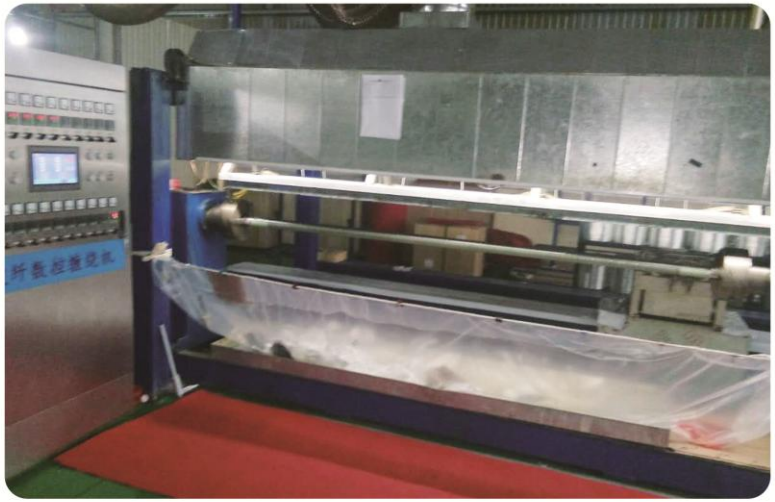
COMPANY INTRODUCTION

企业资质 Enterprise qualification





新产品鉴定会 New product appraisal meeting



1 图1 套管关键工序
Picture 1 : Casing key process

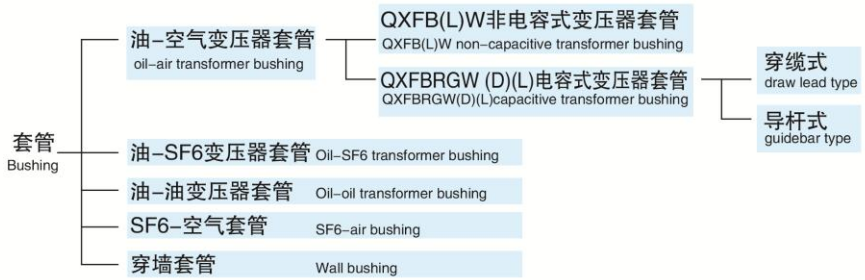
2 图2 我公司的高压试验设备
Picture 2: The high-voltage test equipment of our company

产品运行展示
Product Function

检验报告 Inspection Report

检验报告 Inspection Report

产品结构表 Product Structure



CT安装位长度推荐表 CT Mounting Length Table

额定电压（kV）	推荐值		（mm）	
12	0	150	250	400
24	0	150	250	400
40.5	0	150	250	400
52	0	150	250	400
72.5	0	250	400	550
126	250	400	550	600
145	250	400	550	600
170	250	400	550	600
252	0	400	500	700
363	0	400	500	700
550	0	400	500	700

说明：Notes:

1、套管CT安装位和绝缘净距调整时请相应调整套管的总长、油端总长、电缆引入长度等相关尺寸。

2、产品代号是对产品安装尺寸与产品性能的描述、如更改产品安装尺寸、我公司需要调整产品代号。

1.When the CT mounting position of the bushing and the insulation clearance are adjusted, adjusted should also be some related figures such as the total length of the bushing, the total length of the oil end and the length of the cable entry.

2.Product code number is the description of the product mounting measure and performance; so if the size and the performance are changed, our company is entitled to change the code number.

产品特殊性能指标

Performance and Technical Index of the Products

急速冷热冲击试验：

INSTANT HOT AND COLD IMPACT TEST

套管能耐受140℃环境中保持6小时，随后迅速投入20℃冷水中保持 3 小时，急速冷热冲击试验2次，试验前后性能保持不变。

The bushing has stood an environment of 140℃,after which it was immediately put into cold water and stayed there for 3 hours. The instant hot and cold impact test is done twice, after which the performance of the bushing remains unchanged.

浸水试验：

IMMERSION TEST

套管浸没在20℃冷水中，持续浸泡72小时浸水试验，试验前后性能保持不变。

The bushing is immersed in 20℃ cold water for 72 hours continually. The performance of the bushing is unchanged after the test.

超低温冷冻循环试验：

REPEATED SUPER–LOW TEMPERATURE FREEZING TESTS

4小时内以每小时降温10～20℃的速度由室温降至–50℃，保持16小时。然后，在4小时内以每小时10～20℃的速度回升至室温，再降温至–50℃，循环20次，试验前后套管性能保持不变。

In 4 hours the temperature is lowered from room temperature to –50℃,at the speed of dropping 10–20℃ every hour. The temperature remains at –50℃ for 16 hours. In the next 4 hours, the temperature is raised back to room temperature at the speed of raising 10–20 ℃ every hour and then is lowered to –50℃. The above process is repeated 20 times, after which the performance of the bushing remains unchanged.

机械过负荷试验：

MECHANIC OVERLOAD TEST

横纵两个方向施加4000N的机械负荷值，持续时间7天，试验前后性能保持不变。

The product can withstand a load of 1250N both horizontally and vertically. Such load is applied for 7 days, after which the performance of the product remains unchanged.

主要合作变压器及开关厂家

MAIN TRANSFORMER AND SWITCH MANUFACTURERS

我公司已和全国七十多家变压器厂和开关厂长期合作：西电集团（中特电气；西电济南；成都西电蜀能电器；常州西电；西开）；保定天威集团（保变电气；保变（合肥）变压器； 保特变； 保菱变压器；（江苏）五洲变压器有限公司；云变）；特变电工集团（新疆变压器厂；沈阳变压器；衡阳变压器）；卧龙电气集团（浙江；银川；烟台东源）；平高集团（平顶山；威海）；上海正泰集团（变压器；开关）；南京立业；江苏华鹏；三变科技；吴江变压器；申达变压器；大连信达；广州广高；成都双星；成都金成铭；重庆重变；汉中变等。

山东省内变压器厂和开关厂长期合作：山东电力设备；山东泰开（变压器；开关）；山东达驰（变压器；开关）；山东鲁能（变压器；开关）；威特变等

国外变压器厂：南通晓星；西门子变压器（武汉）有限公司；常州东芝舒电变压器等。该产品不仅外观漂亮，而且性能稳定质量可靠、便于安装，受到了国内外用户一致好评。

Our company has cooperated with more than 70 transformer plants in China and kai guanchang long-term cooperation: xd group (in electric; West Jinan; Electrical appliances from Chengdu to Sichuan electric power; Changzhou power west; West); Baoding Print-Rite group (Bao electric; Transformer (Hefei) transformer; Bao variation; Water chestnut transformer; (Jiangsu) Wuzhou transformer co., ltd.; Cloud change); Special electrical group (Xinjiang transformer factory; Shenyang transformer; Hengyang transformer); Wolong electric group (Zhejiang; Yinchuan Yantai Eastern); Pinggau group (Pingdingshan; Weihai); Shanghai CHINT group (transformer; Switch); A career in Nanjing; River; Three variable technology; Wujiang transformer; Shen da transformer; Dalian Cinda; Guangzhou is very wide; Chengdu double star; Chengdu jinchengming; Chongqing heavy change; Hanzhong, etc.
Long-term cooperation between inner transformer plant and kai guanchang in Shandong province: Shandong electric power equipment; Shandong taikai (transformer; Switch); Shandong dachi (transformer; Switch); Shandong luneng (transformer); Switch); Witt, etc
Foreign transformer factory: Nantong Xiao star; Siemens transformer (Wuhan) co., ltd.; Changzhou Toshiba Shu transformer, etc. The product is not only beautiful in appearance, but also stable in quality and easy to be installed. it has been well received by users both at home and abroad.

应用案例

APPLICATION CASE

近三年累计供货550KV及下玻璃钢套管5589支,其中252KV共832支，其中铁路供货业绩478支，占铁路行业75%的市场份额。其中包含国家重点项目:四川巴塘川藏联网枢纽工程、国网山东淄博中化竞赛项目、成渝高铁项目、长昆高铁项目、石太线铁路项目、成浦铁路项目、锦阜铁路、渝万铁路、渝黔铁路、出口蒙古国电力公司改造项目、出口埃塞俄比亚高铁、马来西亚、印尼项目等。

In the past three years, the 5,589 has been supplied to 550 kv and lower grp casing, of which 252 kv is 832, and 478 railway supply performance, accounting for 75 % of the market share of the railway industry. It contains national key projects: the Batang hub project in Batang, Sichuan, the Sinochem project, the cheng high-speed railway project, the Quinn high-speed railway project, the stone railway project, the purkinje railway project, the Jin railway, the Chongqing railway, the Chongqing and Guizhou railway, the transformation project of Mongolia electric power company, and the export of high-speed railway in Ethiopia, Malaysia, Indonesia project, etc.

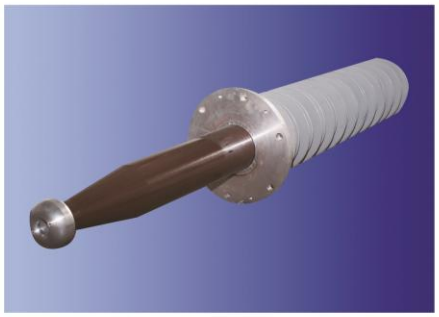
产品业绩（部分）

Achievement (part)

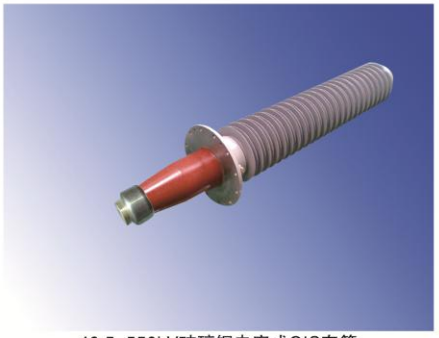
山东七星高压电气有限公司生产的QXFBRGW-0.4~550玻璃钢电容式变压器套管现已在江西、湖北、辽宁、吉林、浙江、四川、西藏、内蒙、广东、陕西、新疆等国网、南网、高铁、新能源领域、五大发电集团等电力系统安全运行，并与全国几十个变压器厂配套安装。QXFBRGWDL-126/800-3和QXFBRGWDL-252/2000-3短尾穿缆式玻璃钢电容式变压器套管已出口到蒙古国，QXFBRGWDL-40.5/1000-4、QXFBRGWDL-145/630-4和QXFBRGWDL-245/630-4短尾穿缆式玻璃钢电容式变压器套管已出口到埃塞俄比亚、巴基斯坦，该产品性能稳定、便于安装，受到了国内外用户一致好评。

QXFBRGW-0.4~550 FRP Capacitive transformer bushings, produced by Shandong Qixing Electrical Co., Ltd., are now working steadily in the power systems of provinces such as Shandong,Jiangxi, Shanxi,Hubei, Liaoning,Jilin,Zhejiang,Sichuan,Guangdong,Guangxi,Gansu,Qinghai,Ningxia,Xinjiang,Tibet,China Network,South Network,High-speed rail,New energy field,Five power generation groups and are now mounted on the transformers of over several dozens of transformer companies. QXFBRGWDL-126/1250-4 and FBRGWDL-252/2000-4 short tail draw-lead FRP capacitive transformer bushings have been exported to Southeast Asia, Russia and Mongolia,Vietnam,Mozambique. With the feature of steady performance and easy mounting, This series of bushing has won the trust of customers from home and abroad.

产品名录 Product List



12~550kV玻璃钢电容式变压器套管
12–550kV FRP capacitive transformer bushing



40.5~550kV玻璃钢电容式GIS套管
40.5–550kV FRP capacitive GIS bushing

363kV玻璃钢电容式变压器套管
363kV FRP capacitive transformer bushing

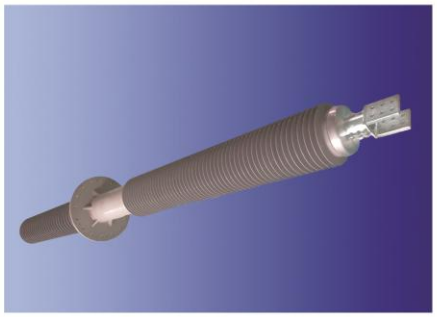
252kV玻璃钢电容式变压器套管
252kV FRP capacitive transformer bushing

40.5~550kV玻璃钢电容式油–SF6变压器套管
40.5–550kV FRP capacitive oil–SF6 transformer bushing

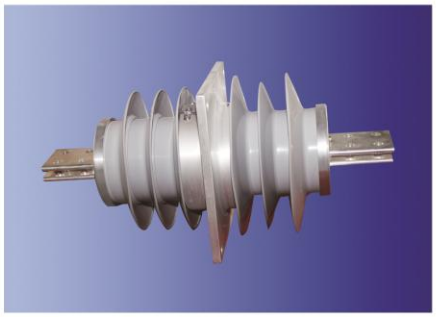
40.5~550kV玻璃钢电容式油–油变压器套管
40.5–550kV FRP capacitive oil–oil transformer bushing

126kV玻璃钢电容式变压器套管
126kV FRP capacitive transformer bushing

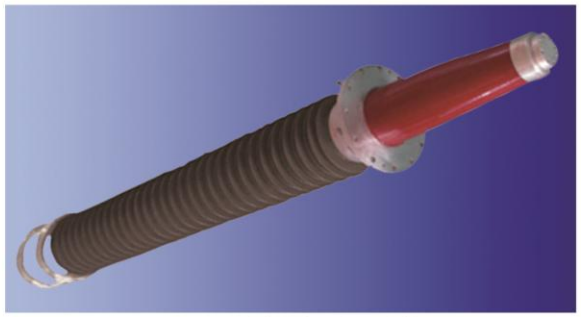
72.5kV玻璃钢电容式变压器套管
72.5kV FRP capacitive transformer bushing



12~550kV玻璃钢电容式穿墙套管
12–550kV FRP capacitive wall bushing



排型玻璃钢电容式穿墙套管
Bar type capacitive wall bushing



72.5–550kV玻璃钢电容式GIS套管
72.5–550kV FRP capacitive GIS bushing

17.5~40.5kV大电流套管
17.5~40.5kV Large Current Bushing

智能产品说明

智能型玻璃钢电容式套管是我公司为满足“电网智能化”要求而最新研制的产品，本产品在原有的“玻璃钢电容式套管”基础上增加了自诊断在线监测系统，可在线监测产品的泄露电流、三相电流矢量和、主绝缘的介质损耗与电容量、套管和变压器内绝缘的局部放电量；本产品还可以在原有的“玻璃钢电容式套管”基础上增加了智能端子和绝缘指示灯，能非常方便地实现绝缘实时在线监测。

智能型玻璃钢电容式套管的分类

1）自诊断在线测量系统　　2）智能端子测量系统

自诊断型玻璃钢电容式套管的特点

1.与当前普遍采用的测量介损的在线监测装置相比，具有结构简单、安装方便、成本低、稳定性可靠性高等特点；介损测量在线监测装置在现场强电磁干扰环境下，由于PT相位误差、监测系统本身误差等因素影响，测量数据的稳定性差，数据的可靠性不高，已经安装的很多产品不具有实际使用和参考价值。三相电流矢量和测量方法在三相套管不会同时故障假设前提下，能有效判别套管绝缘故障。本装置还具有以下性能特点：

2.将电流测量传感器集成至特殊设计的末屏适配器中，大大减小了末屏引线长度，避免了末屏开路的可能性，安全性强；

3.电流测量集成在末屏适配器中，末屏适配器对电流测量传感器具有很好的屏蔽作用，可显著提高测量准确度；

4.监测主机采用高速数字信号处理器，能实时准确度地实现对三相泄漏电流和三相电流矢量和的测量和计算；监控主机具有本地显示、报警和数据远程传输等多种功能。

智能端子型玻璃钢电容式套管的特点

1）智能装置不影响产品本身的安全运行

智能装置与产品内部的分压屏并联连接，而分压屏的电容量远远大于变压器套管的主电容量，在产品运行时分压屏所承担的电压非常低，很容易满足应有的绝缘水平要求。因此，无论发生开路或短路故障，甚至发生烧损，都不会对产品本身的安全运行造成任何影响。

2）抗干扰能力强

智能套管的主绝缘内部设置了分压屏，通过分压屏智能装置可直接获取产品毫安（mA）级的电容电流，从而为信号处理单元提供了大信号，极大地提高了智能装置的抗干扰能力。

3）直接监测产品电容量

经验表明，玻璃钢电容式变压器套管的电容量变化能直接反映主绝缘内部电容屏的运行状态和击穿程度。通过智能芯片提前预设套管电容屏击穿程度阀值，警示灯能简单、及时、高效地反映其绝缘击穿状况。

4）可升级的“智能端子”

随着智能电网的快速发展，在不久的将来，用户也许需要对整个变电站进行绝缘在线监测的系统升级，以便通过设备绝缘信息管理平台对全站设备的绝缘状态进行管理。由于智能套管可将“智能端子”作为输出接口，用户在不需要对套管进行任何大的改进的前提下，便能完成对套管绝缘在线监测系统的升级改造，真正实现套管绝缘击穿状态实时监控，避免恶性事故发生。

5）方便实用的结构

为了最大程度地方便用户的应用，智能套管在设计时就充分考虑到与普通套管在例行试验、交接试验、预防性试验等方面的通用性。

QX Bushing




智能套管的原理及结构

智能套管的原理如图1所示。图中，HV为套管连接电网的高压端子，C1是套管主绝缘电容，C2是智能电容，C2的电容量远大于C1。a、b为智能端子，从C2的两个极板上引出，可外接绝缘监测设备等智能装置。两个电容共同承受产品的绝缘耐受电压。由于C2的电容量大大高于C1，外接的智能装置在任何情况（短路或断路）下都不会对产品的主绝缘造成影响。同时，C2电容量的选取还考虑到外接智能装置的阻抗值，以保证流经C1的电容电流基本完全通过智能装置。

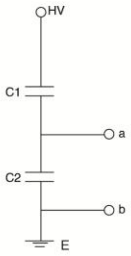


图1 智能套管的原理图

从图1可见，对套管进行绝缘监测时不需要利用末屏端子，保证了套管的安全。智能套管的结构图与玻璃钢电容式变压器套管外形尺寸一样，只是增加一个智能端子，智能端子外接一个绝缘信号灯或智能电压表，套管运行时，绝缘信号灯不亮，当套管内部分电容屏发生击穿时，绝缘信号灯发出红光，此时，维护人员可及时采取措施以防发生严重事故。绝缘信号灯不需外接电源。

说明：

1.E端子在套管法兰的一侧，标有“测量端子”标识，　a、b即为智能端子，在套管法兰的另一侧，标有“智能端子”标识；

2.E、a和b三个端子之间不能进行交流耐压试验；

3.产品正常运行时，必须保证E端子可靠接地；

4. a、b端子之间可连接绝缘在线监测装置；

5.产品正常运行时，a、b端子之间开路电压范围为20V~100V,请注意高压。

智能型玻璃钢电容式套管的供货范围

我公司所有额定电压为72.5 kV及以上的套管均可提供智能型产品、包括油–空气变压器套管、油–SF6变压器套管、油–油变压器套管、SF6–空气变压器套管。

智能型玻璃钢电容式套管的产品型号表述方式

产品类型	产品型号	
	智能套管	非智能套管
油—空气变压器套管	QXZFBRGW (D)–(L) –XXX/XXX–X	QXFBRGW (D)–(L) –XXX/XXX–X
油—SF6变压器套管	QXZFGRBG(L)–XXX/XXX	QXFGRBG(L)–XXX/XXX
油—油变压器套管	QXZFGRBO(L)–XXX/XXX	QXFGRBO(L)–XXX/XXX
SF6—空气套管	QXZFGRGW–XXX/XXX	QXFGRGW–XXX/XXX

Smart Products Description

Smart FRP capacitive bushing is a latest product that our company has developed to meet the demand of "building a smart power grid". Based on the original "FRP capacitive bushing", smarting terminal is added to realize the convenient real-time inspection of insulation.

Classification of Smart FRP Capacitive Bushings

1) self diagnosis on-line measurement system 2) intelligent terminal measuring system

The characteristics of self diagnosis type glass steel condenser bushing

1. With the current widely used in measuring dielectric loss on-line monitoring device compared with has the advantages of simple structure, convenient installation, low cost, high stability and reliability; measurement of dielectric loss on-line monitoring device in strong electromagnetic interference environment, due to the PT phase error and monitoring system for the error and other factors influence, measurement data of poor stability, data reliability is not high, has installed a lot of products does not have practical use and the reference value. Three phase current vector and measurement method can effectively distinguish the failure of casing insulation under the assumption that the three phase casing is not at the same time. This device also has the following characteristics:

2 the current measurement sensor integrated into the special design of the end of the screen adapter, greatly reducing the length of the end of the screen, to avoid the possibility of the end of the screen open, safe and strong;

3 current measurement is integrated in the end screen adapter, and the terminal screen adapter has a good shielding effect on the current measurement sensor, which can improve the accuracy of measurement;

4. Monitoring host machine adopts high speed digital signal processor, real-time and accurate degree to realize the three-phase leakage current and three-phase current vector and the measurement and calculation; monitoring host with local display, alarm and remote data transmission and other functions.

Features of Smart FRP Capacitive Bushings

1) The smart device does not affect the safe performance of the product per se

The smart device and the voltage dividing screen are connected in parallel. While the capacitance of the voltage diving screen is mush larger than the main capacitance of the transformer bushing. So the voltage that is assumed by the voltage dividing screen is very low, which can easily meet the insulation requirement. Therefore, whether there is open circuit or short circuit breakdown, or even when it's burnt, the safe performance of the product per se will not be affected.

2) strong anti-interference ability

Inside the main insulation unit of the smart bushing the voltage dividing screen is installed. Through the smart device of the voltage dividing screen, an mA level capacitive current can be directly obtained so as to provide a strong signal for the signal processing unit and immensely improves the anti-interference ability of the smart device.

3) The direct inspection of the capacitance of the product

Based on the experience, the capacitance change of the FRP capacitive transformer bushing can directly reflect the running and the breakdown degree of the capacitive screen inside the main insulation unit. Through smart chip the breakdown threshold value of the bushing capacitive screen is preset and the alarm light could timely, effectively reflect the breakdown status of the insulation device.

4) the "smart terminal" that can be upgraded

with the rapid development of the smart grid, in the near future, customers may have to upgrade the system of on-line insulation inspection of the whole transformer substation so as to manage the insulation condition of all the equipment of the substation through the equipment insulation information management platform. As the smart bushing can use smart terminal as the output interface, the customers can upgrade the on-line inspection system of the bushing insulation without undertaking a large-scale improvement. Therefore the real time inspection of the breakdown status of the bushing insulation is realized to avoid the occurrence of serious accidents.

5) Convenient and practical structure

To maximize the convenience of the customers in application, compatibility between smart bushing and ordinary bushing has been taken into consideration in aspects such as routine test, hand-over test and preventive test.

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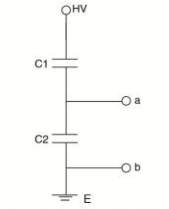
The Principle and Structure of Smart Bushing

The principle of the smart bushing is shown in chart 1. In the chart, HV is high-voltage terminal where the bushing connects the grid. C1 is the main insulation capacitance of the bushing, C2 is the smart capacitance, while the capacitance of C2 is much larger than that of C1. a and b are smart terminals, and are led out from two plates of C2, and can be connected to smart devices such as insulation inspection equipment. The two capacitance jointly bear the insulation withstand voltage. As the capacitance of C2 is much higher than that of C1, the externally connected smart device won't in any case (short circuit or open circuit) affect the main insulation of the product. At the same time, in the adoption of C2 capacitance the impedance value of external smart device has been taken into consideration to ensure the capacitance current through C1 almost totally goes through the smart device.

Seen from Chart 1, end shield is not needed in the insulation inspection for the bushing so as to ensure the safety of the bushing. The external contour of the smart bushing is the same as the size and external contour of FRP capacitive transformer bushing, with only one smart terminal added. The smart terminal is externally connected to a insulation signal light or smart voltmeter. When the bushing is running, the signal light is off; while breakdown happens on part of the capacitive screen inside the bushing, the signal light gives out red light, which informs the maintenance personnel to take timely measures to avoid serious accidents. The insulation signal light does not require external power.



principle of intelligent casing

Notes:

1. E terminal is on one side of the bushing flange, with the mark of "measurement terminal". a and b are smart terminals, which are on the other side of bushing flange with the mark of "smart terminal".
2. Among E, a and b no AC withstand voltage test should be undertaken.
3. When the product is regularly running, E terminal must be reliably wired to the ground.
4. Between a and b insulation online inspection device should be connected.
5. When the product is regularly running, the open circuit voltage between terminal a and terminal b is 20V~100V.

The Supply Range of the Smart FRP Capacitive Bushing

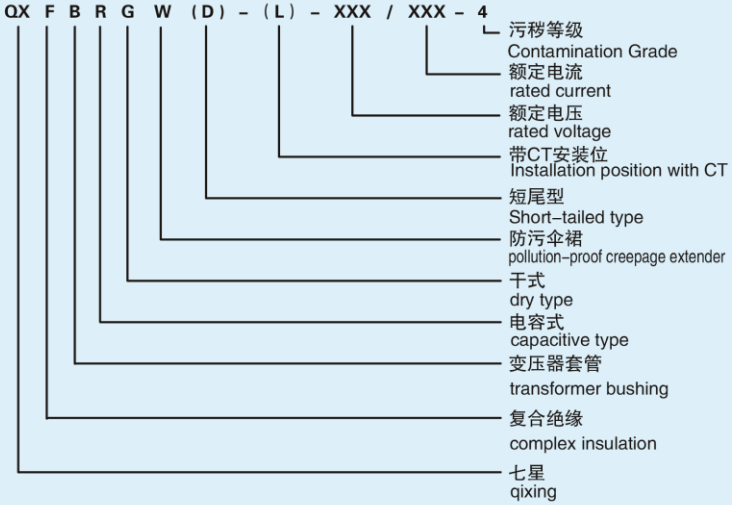
The smart products can be used on any of our bushings with rated voltage at 72.5kV and above, including oil-air transformer bushing, oil-SF6 transformer bushing, oil-oil transformer bushing, SF6-oil transformer bushing.

The Coding of the Smart FRP Capacitive Bushing

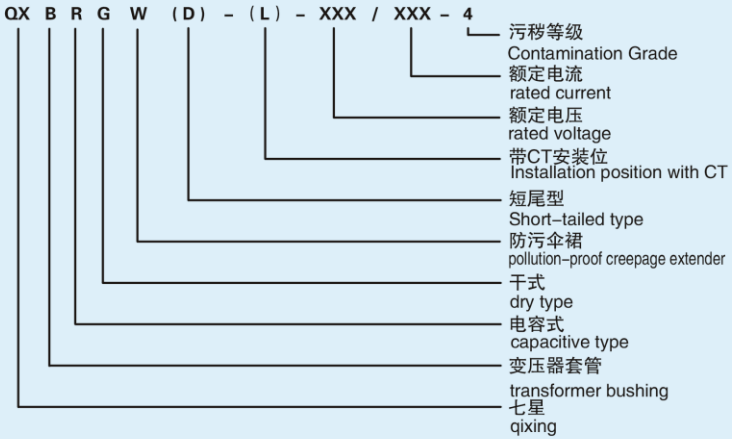
产品类型 Product Category	产品型号 Product Models	
	智能套管 Smart Bushing	非智能套管 Non-Smart Bushing
油—空气变压器套管 Oil-air transformer bushing	QXZFBRGW (D)-(L) -XXX/XXX-X	QXFBRGW (D)-(L) -XXX/XXX-X
油—SF6变压器套管 Oil-SF6 transformer bushing	QXZFGRBG(L)-XXX/XXX	QXFGRBG(L)-XXX/XXX
油—油变压器套管 Oil-oil transformer bushing	QXZFGRBO(L)-XXX/XXX	QXFGRBO(L)-XXX/XXX
SF6—空气套管 SF6-air bushing	QXZFGRGW-XXX/XXX	QXFGRGW-XXX/XXX

玻璃钢电容式变压器套管
FRP Capacitive Transformer Bushing

玻璃钢电容式变压器套管型号说明 Description



玻璃钢电容式瓷外套变压器套管型号说明 Description



QX Bushing
电容式变压器套管
Capacitance of transformer bushing

产品主要技术性能指标 Main technical index

系统标称电压（kV） Nominal voltage		10	20	35	52	66	110	145	170	220	330	400	500
额定电压（设备最高电压）（kV） rated voltage (the highest voltage of the equipment)		12	24	40.5	52	72.5	126	145	170	252	363	420	550
工频耐受电压（kV/min） frequency with stand voltage	干 Dry	30	55	95	105	155	255	305	355	505	625	750	870
	湿 Wet	28	50	80	95	140	230	275	325	460	535	–	–
雷电冲击耐受电压（kV） Thunder impulse with stand voltage	全波 Whole wave	75	125	200	250	325	550	650	750	1050	1175	1550	1800
	截波 Intercepled wave	–	137.5	220	275	357.5	605	715	825	1155	1293	1705	1980
操作冲击湿耐受电压（kV） Switching impulse wet with stand voltage		–	–	–	–	–	–	–	–	850	950	1175	1300
介质损耗因数 dielectric dissipation factor	最大值 Maximum	1.05Um/ √3 下不大于0.4% At 1.05Um,the lower limit should not be over 0.4%.											
	增值 Increment	1.05Um/ √3 到Um间变化不大于0.1% At 1.05Um,the cariation to Um should not be over 0.1%											
试验抽头绝缘水平（kV/min） test tap insulation level		3											
局部放电水平（pC） local discharge	Um	≤10											
	1.05Um/√3	≤5											
密封性试验 leakage test		0.2MPa/20min无泄漏 0.2MPa/20min without leakage											
热短时电流 thermal short time current		套管额定电流的25倍，最大为100kA，持续时间2S 25 times of the bushing rated current,the maximum is 100kA,and lasts 2S.											
额定频率（Hz） rated frequency		50											
户外伞群 outdoor creepage extender		伞形为大小伞防污伞群，公称爬电距离符合GB/T26218的要求 There will be large and small creepage extenders.Nominal creepage distamce complies with the requirement of GB/T26218.											

悬臂耐受负荷 cantilever withstand load（N）

额定电压 （kV） rated voltage	额定电流 rated current （A）			
	≤800	1000–1600	2000–2500	≥3150
≤52	1600N	1600N	2500N	3150N
72.5	2000N	2000N	3150N	4000N
123~145	3150N	3150N	4000N	4000N
170~550	4000N	4000N	5000N	5000N

套管的适用环境 Suitable environment for the bushings:

海拔高度：适用于海拔2000m及以下地区，当海拔超过2000m时，技术条件由双方另议；
环境温度：适用于最高温度不超过+50℃，最低温度不低于–50℃，当超过该温度范围时，技术条件由双方另议；
安装角度：可任意角度安装；
污秽等级：可用于Ⅲ级以上重污秽地区。

Elevation:it’s suitable to use at 2000m or lower. When the elevation is higher than 2000m, technical terms should be negotiated by both parties otherwise.
environment temperature: the maximum temperature should not be over 50℃ and the minimum temperature should not be lower than –50℃.when the temperature is beyond this range, technical terms should be negotiated by both parties otherwise.
Installation angle: any angle will do.

订货须知 Order tips:

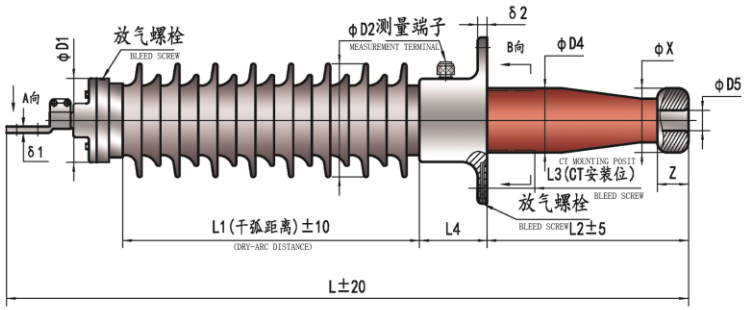
电气参数：额定电压、额定电流、额定频率、外绝缘爬电距离及绝缘净距、油端长度、穿缆长度（很重要）、CT安装位长度（很重要）。
环境参数：环境温度、海拔高度、污秽等级。

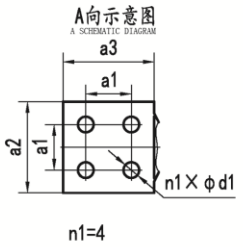
注：套管法兰和接线端子的尺寸可以根据变压器制造商的要求进行特殊设计，也可对用户原有套管提供替代品。

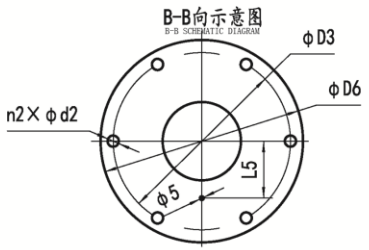
Electrical parameters: rated voltage, rated current, rated frequency, external insulation creepage distance, net insulation distance, oil end length，length of the draw lead（very important），CT mounting position length (veryimportant)
Environment parameter: temperature, elevation, contaminationlevel.

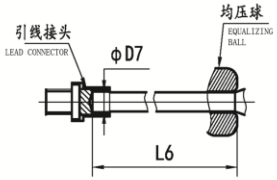
Notes: the size of bushing flange and wiring terminal can be specifically designed and substitute for existing bushing can also be supplied.

12–52kV玻璃钢电容式变压器套管（穿缆式）
12–52kV FRP capacitive Transformer Bushing (draw lead type)







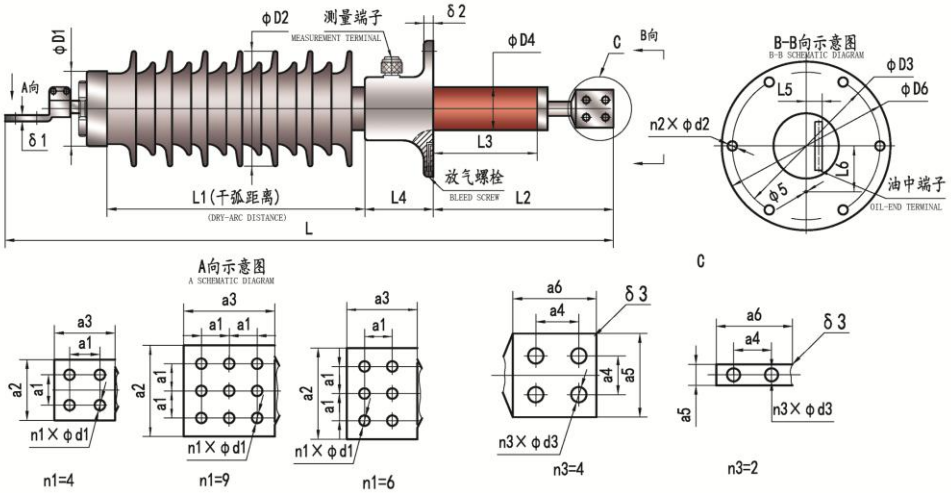


产品代号 Product Code	型号规格 Specification	总长 Total Length	空气端线端子 Air Wiring Terminal				户外伸群 Outdoor Creepage Extender		安装法兰 Mounting Flage						油端芯体 Oil-end Core			均压球 Upper Equalizing Ball		将军座外径 General s socket diamter	导管内径 Pipe Diameter	引线接头内孔 Lead Connector	电缆引入长度 Cable Entry Length	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes Number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender	长度 length	孔中心距 Hole Center Diatence	外径 Hole diameter	孔数×孔径 Holes Number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total length	接地长度 Earth Length	芯体直径 Core Diameter	高度 height	直径 Diamter					
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L5	δ2	L2	L3	D4	Z	X	D1	D5	D7	L6	
BT101	QKFBRGW-12/630-4	595	40	80×80	4×Φ14	12	150	220	70	190	220	6×Φ14	60	18	90	0	65	30	65	139	40	28	530	20
BT105	QKFBRGW-12/1250-4	595	40	80×80	4×Φ14	12	150	220	70	190	220	6×Φ14	60	18	90	0	65	30	65	139	40	32	530	25
BT201	QKFBRGW-24/630-4	765	40	80×80	4×Φ14	12	280	220	70	190	220	6×Φ14	60	18	130	0	85	30	90	139	40	28	530	20
BT205	QKFBRGW-24/1250-4	765	40	80×80	4×Φ14	12	280	220	70	190	220	6×Φ14	60	18	130	0	85	30	90	139	40	32	530	25
BT301	QKFBRGW-40.5/630-4	935	40	80×80	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	180	0	100	30	90	139	40	28	700	30
BT303	QKFBRGW-L40.5/630-4	1185	40	80×80	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	180	250	100	30	90	139	40	28	950	35
BT305	QKFBRGW-40.5/1250-4	935	40	80×80	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	180	0	100	30	90	139	40	32	700	30
BT307	QKFBRGW-L40.5/1250-4	1185	40	80×80	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	180	250	100	30	90	139	40	32	950	35
BT401	QKFBRGW-52/630-4	1115	40	80×80	4×Φ14	12	560	220	70	190	220	6×Φ14	60	18	200	0	100	30	90	139	40	28	880	40
BT404	QKFBRGW-L-52/630-4	1515	40	80×80	4×Φ14	12	560	220	70	190	220	6×Φ14	60	18	600	400	100	30	90	139	40	28	1280	45
BT405	QKFBRGW-52/1250-4	1115	40	80×80	4×Φ14	12	560	220	70	190	220	6×Φ14	60	18	200	0	100	30	90	139	40	32	880	40
BT408	QKFBRGW-L-52/1250-4	1515	40	80×80	4×Φ14	12	560	220	70	190	220	6×Φ14	60	18	600	200	100	30	90	139	40	32	1280	45

注：非电容型套管只是产品型号中无RG，无测量端子，外形尺寸与同规格套管相同。
Note: non capacitance type bushing is no RG in the product model, no measurement terminals, the size of the same size with the same casing.

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

24kV玻璃钢电容式变压器套管（导杆式）
24kV FRP capacitive Transformer Bushing (guidebar type)



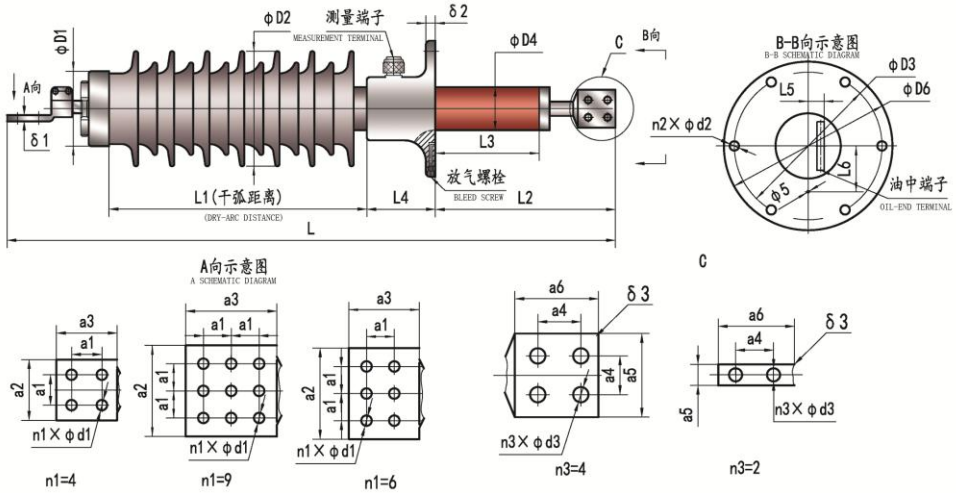
产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange							油纸芯体 Oil-end Core			油底接线端子 Oil-end Wiring Terminal						上均压环直径 Upper Equalizing Ball Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diameter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	法兰厚度 Flange thickness	总长 Total Length	油纸绝缘距离 Oil-end Insulation clearance	芯体直径 Core Diameter	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	偏移量 Offset				
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L3	D3	D6	n2×Φd2	L6	δ2	L2	L3	D4	a4	a5×a6	n3×Φd3	δ3	L5	D1			
BT2001	QXFBRGW-24/800-4	785	40	80×80	4×Φ14	12	280	220	70	190	220	6×Φ14	60	18	225	100	70	30	60×60	4×Φ14	10	25	88	20		
BT2002	QXFBRGW-24/1000-4	785	40	80×80	4×Φ14	12	280	220	70	190	220	6×Φ14	60	18	225	100	70	30	60×60	4×Φ14	10	25	88	30		
BT2003	QXFBRGW-24/1250-4	785	40	80×80	4×Φ14	14	280	220	70	190	220	6×Φ14	60	18	225	100	70	30	60×60	4×Φ14	10	25	88	30		
BT2004	QXFBRGW-24/1600-4	860	50	100×100	4×Φ18	16	280	220	70	190	220	6×Φ14	60	18	270	100	85	40	80×80	4×Φ14	14	35	103	30		
BT2005	QXFBRGW-24/2000-4	860	50	100×100	4×Φ18	18	280	220	70	190	220	6×Φ14	60	18	270	100	85	40	80×80	4×Φ14	14	35	103	30		
BT2006	QXFBRGW-24/2500-4	895	50	120×120	4×Φ18	20	280	220	70	190	220	6×Φ14	60	18	270	100	85	40	80×80	4×Φ14	16	35	103	35		
BT2007	QXFBRGW-24/3150-4	930	50	120×120	4×Φ18	20	280	220	70	190	220	6×Φ14	60	18	305	100	85	50	100×100	4×Φ18	16	40	103	35		
BT2008	QXFBRGW-24/4000-4	915	50	150×155	9×Φ18	20	280	220	70	190	220	6×Φ14	60	18	230	100	100	45	80×90	4×Φ14	20	0	118	45		
BT2009	QXFBRGW-24/5000-4	925	50	150×155	9×Φ18	20	280	220	70	190	220	6×Φ14	60	18	240	100	100	50	100×100	4×Φ18	25	0	118	45		
BT2010	QXFBRGW-24/6300-4	980	60	180×125	6×Φ18	20	280	220	70	250	290	6×Φ18	90	18	290	100	120	60	120×150	4×Φ18	20	0	133	45		
BT2011	QXFBRGW-24/8000-4	1005	60	180×145	6×Φ18	20	280	290	70	250	290	6×Φ18	90	18	315	100	125	60	120×150	4×Φ18	20	0	143	45		

注：非电容型套管只是产品型号中无RG，无测量端子，外形尺寸与同规格套管相同。
Note: non capacitance type bushing is no RG in the product model, no measurement terminals, the size of the same size with the same casing.

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

低电压导杆式套管
Low Voltage Guidebar Bushing

40.5kV玻璃钢电容式变压器套管（导杆式）
40.5kV FRP capacitive Transformer Bushing (guidebar type)



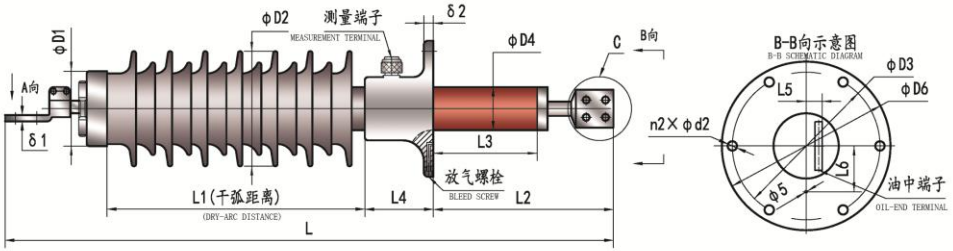
产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange							油纸芯体 Oil-end Core			油底接线端子 Oil-end Wiring Terminal						上均压环直径 Upper Equalizing Ball Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diameter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	法兰厚度 Flange thickness	总长 Total Length	油纸绝缘距离 Oil-end Insulation clearance	芯体直径 Core Diameter	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	偏移量 Offset				
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L3	D3	D6	n2×Φd2	L6	δ2	L2	L3	D4	a4	a5×a6	n3×Φd3	δ3	L5	D1			
BT3001	QXFBRGW-40.5/800-4	955	40	80×85	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	275	150	85	30	60×60	4×Φ13	10	25	103	35		
BT3002	QXFBRGW-40.5/1000-4	955	40	80×85	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	275	150	85	30	60×60	4×Φ13	10	25	103	45		
BT3003	QXFBRGW-40.5/1250-4	955	40	80×85	4×Φ14	12	400	220	70	190	220	6×Φ14	60	18	275	150	85	30	60×60	4×Φ13	10	25	103	45		
BT3004	QXFBRGW-40.5/1600-4	1020	50	100×105	4×Φ14	16	400	220	70	190	220	6×Φ14	60	18	310	150	100	40	80×80	4×Φ14	14	35	118	45		
BT3005	QXFBRGW-40.5/2000-4	1020	50	100×105	4×Φ18	16	400	220	70	190	220	6×Φ14	60	18	310	150	100	40	80×80	4×Φ14	14	35	118	45		
BT3006	QXFBRGW-40.5/2500-4	1095	60	120×120	4×Φ18	20	400	220	70	190	220	6×Φ14	60	18	350	150	100	50	100×100	4×Φ18	16	40	118	50		
BT3007	QXFBRGW-40.5/3150-4	1095	60	120×120	4×Φ18	20	400	220	70	190	220	6×Φ14	60	18	350	150	100	50	100×100	4×Φ18	16	40	118	50		
BT3008	QXFBRGW-40.5/4000-4	1070	50	150×155	9×Φ18	20	400	220	70	190	220	6×Φ14	60	18	265	150	105	45	80×90	4×Φ14	20	0	125	60		
BT3009	QXFBRGW-40.5/5000-4	1085	50	150×155	9×Φ18	20	400	220	70	190	220	6×Φ14	60	18	280	150	115	50	100×100	4×Φ18	25	0	133	70		
BT3010	QXFBRGW-40.5/6300-4	1140	60	180×125	6×Φ18	20	400	290	70	250	290	6×Φ18	90	18	330	150	125	60	120×150	4×Φ18	20	0	143	75		
BT3011	QXFBRGW-40.5/8000-4	1140	60	180×145	6×Φ18	20	400	290	70	250	290	6×Φ18	90	18	330	150	125	60	120×150	4×Φ18	30	0	143	80		

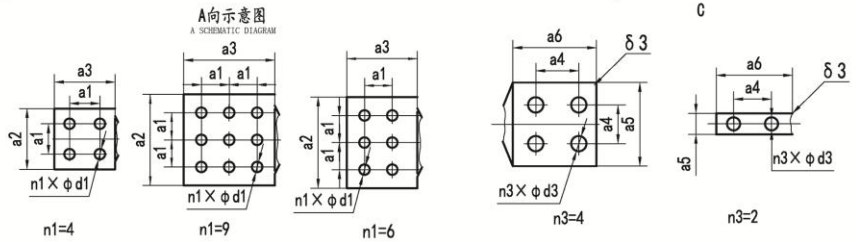
注：非电容型套管只是产品型号中无RG，无测量端子，外形尺寸与同规格套管相同。
Note: non capacitance type bushing is no RG in the product model, no measurement terminals, the size of the same size with the same casing.

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

低电压导杆式套管
Low Voltage Guidebar Bushing

52kV玻璃钢电容式变压器套管（导杆式）
52kV FRP capacitive Transformer Bushing (guidebar type)





产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞裙 Outdoor Creepage Extender		安装法兰 Mounting Flange							油端芯体 Oil-end Core			油端接线端子 Oil-end Wiring Terminal						上均压球直径 Upper Equalizing Ball Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	法兰厚度 Flange thickness	总长 Total Length	油端绝缘距离 Oil-end Insulation clearance	芯体直径 Core Diameter	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	偏移量 Offset			
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L3	D3	D6	n2×Φd2	L6	δ2	L2	L3	D4	a4	a5×a6	n3×Φd3	δ3	L5	D1		
BT4001	QXFBRGW-52/800-4	1045	40	80×85	4×Φ14	12	480	220	70	190	220	6×Φ14	60	18	285	140	85	30	60×60	4×Φ13	10	25	103	35	
BT4002	QXFBRGW-52/1000-4	1045	40	80×85	4×Φ14	12	480	220	70	190	220	6×Φ14	60	18	285	140	85	30	60×60	4×Φ13	10	25	103	45	
BT4003	QXFBRGW-52/1250-4	1045	40	80×85	4×Φ14	12	480	220	70	190	220	6×Φ14	60	18	285	140	85	30	60×60	4×Φ13	10	25	103	45	
BT4004	QXFBRGW-52/1600-4	1110	50	100×105	4×Φ14	16	480	220	70	190	220	6×Φ14	60	18	320	140	100	40	80×80	4×Φ14	14	35	118	45	
BT4005	QXFBRGW-52/2000-4	1110	50	100×105	4×Φ18	16	480	220	70	190	220	6×Φ14	60	18	320	140	100	40	80×80	4×Φ14	14	35	118	45	
BT4006	QXFBRGW-52/2500-4	1185	60	120×120	4×Φ18	20	480	220	70	190	220	6×Φ14	60	18	360	140	100	50	100×100	4×Φ18	16	40	118	50	
BT4007	QXFBRGW-52/3150-4	1185	60	120×120	4×Φ18	20	480	220	70	190	220	6×Φ14	60	18	360	140	100	50	100×100	4×Φ18	16	40	118	50	
BT4008	QXFBRGW-52/4000-4	1160	50	150×155	9×Φ18	20	480	220	70	190	220	6×Φ14	60	18	275	140	105	45	80×90	4×Φ14	20	0	125	60	
BT4009	QXFBRGW-52/5000-4	1175	50	150×155	9×Φ18	24	480	220	70	190	220	6×Φ14	60	18	290	140	115	50	100×100	4×Φ18	25	0	133	70	
BT4010	QXFBRGW-52/6300-4	1230	60	180×125	6×Φ18	20	480	290	70	250	290	6×Φ18	90	18	340	140	125	60	120×150	4×Φ18	20	0	143		
BT4011	QXFBRGW-52/8000-4	1230	60	180×145	6×Φ18	20	480	290	70	250	290	6×Φ18	90	18	340	140	125	60	120×150	4×Φ18	30	0	143		

注：非电容型套管只是产品型号中无RG，无测量端子，外形尺寸与同规格套管相同。

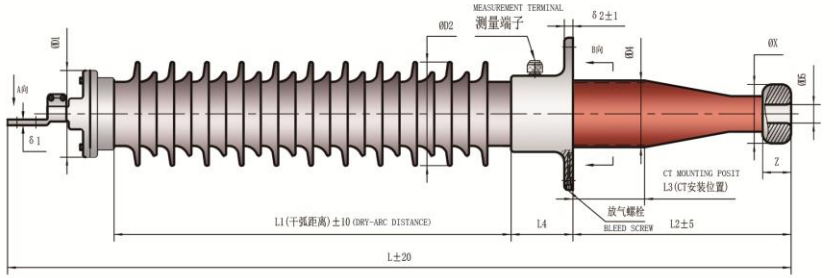
Note: non capacitance type bushing is no RG in the product model, no measurement terminals, the size of the same size with the same casing.

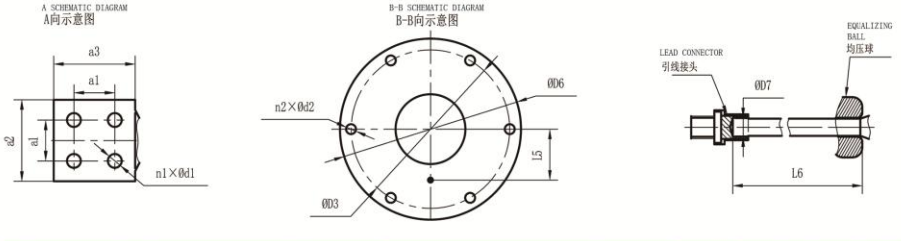
注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

高电压穿缆式套管
High Voltage Draw Lead Bushing

72.5–126kV玻璃钢电容式变压器套管（穿缆式）
72.5–126kV FRP capacitive Transformer Bushing (draw lead type)



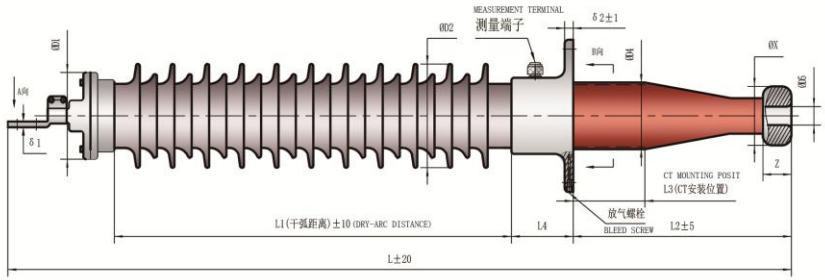


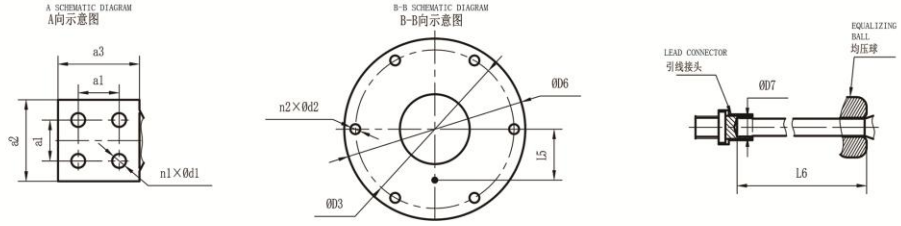
产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞裙 Outdoor Creepage Extender		安装法兰 Mounting Flange							油端芯体 Oil-end Core			油内均压环 Upper Equalizing		将军座直径 General's Socket Diameter	导管内径 Pipe Diameter	引线接头外孔 Lead Connector	电缆引入长度 Cable Entry Length	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	接地长度 Earth Lenth	芯体直径 Core Diameter	高度 Height	直径 Diameter					
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L5	δ2	L2	L3	D4	Z	X	D1	D5	D7	L6	
BT502	QXFBRGW-L-72.5/630-4	1815	40	80×80	4×Φ14	12	700	290	120	280	330	6×Φ18	90	18	710	250	120	60	125	139	40	28	1580	60	
BT503	QXFBRGW-L-72.5/630-4	1965	40	80×80	4×Φ14	12	700	290	120	280	330	6×Φ18	90	18	860	400	120	60	125	139	40	28	1730	65	
BT506	QXFBRGWD-L-72.5/630-4	1685	40	80×80	4×Φ14	12	700	290	120	280	330	6×Φ18	90	18	575	250	120	60	125	139	40	28	1445	55	
BT507	QXFBRGWD-L-72.5/630-4	1830	40	80×80	4×Φ14	12	700	290	120	280	330	6×Φ18	90	18	725	400	120	60	125	139	40	28	1595	60	
BT508	QXFBRGWD-L-72.5/630-4	1980	40	80×80	4×Φ14	12	700	290	120	280	330	6×Φ18	90	18	875	550	120	60	125	139	40	28	1745	70	
BT515	QXFBRGWD-L-72.5/1250-4	1880	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	725	400	120	60	125	139	40	32	1595	75	
BT517	QXFBRGWD-L-72.5/1250-4	1880	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	725	400	135	60	125	155	60	35	1595	85	
BT518	QXFBRGWD-L-72.5/1600-4	1880	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	725	400	135	60	125	155	60	46	1595	85	
BT601	QXFBRGW-126/630-4	2255	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	670	0	150	60	125	139	40	28	2020	105	
BT602	QXFBRGW-L-126/630-4	2505	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	920	250	150	60	125	139	40	28	2270	110	
BT603	QXFBRGWD-L-126/630-4	2655	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	1070	400	150	60	125	139	40	28	2420	115	
BT604	QXFBRGW-L-126/630-4	2805	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	1220	550	150	60	125	139	40	28	2570	120	
BT606	QXFBRGWD-L-126/630-4	2270	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	685	250	150	60	125	139	40	28	2035	100	
BT607	QXFBRGWD-L-126/630-4	2420	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	835	400	150	60	125	139	40	28	2185	105	
BT608	QXFBRGWD-L-126/630-4	2570	40	80×80	4×Φ14	12	1150	290	150	350	400	6×Φ24	105	20	985	550	150	60	125	139	40	28	2335	110	
BT615	QXFBRGWD-L-126/1250-4	2465	50	100×100	4×Φ18	14	1150	290	150	350	400	6×Φ24	105	20	835	400	150	60	125	139	40	32	2185	115	
BT617	QXFBRGWD-L-126/1250-4	2565	50	100×100	4×Φ18	14	1250	290	150	350	400	6×Φ24	105	20	835	400	170	60	125	155	60	35	2285	120	
BT618	QXFBRGWD-L-126/1600-4	2565	50	100×100	4×Φ18	14	1250	290	150	350	400	6×Φ24	105	20	835	400	170	60	125	155	60	46	2285	120	

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

145–170kV玻璃钢电容式变压器套管（穿缆式）
145–170kV FRP capacitive Transformer Bushing (draw lead type)

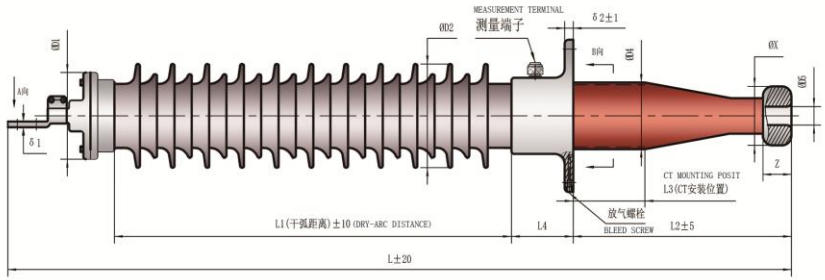


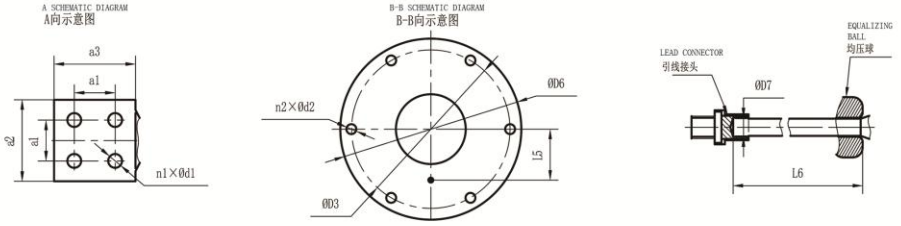


产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange							油纸芯体 Oil-end Core			油内均压球 Upper Equalizing Ball		将军帽直径 General's Socket Diameter	导管内径 Pipe Diameter	引线接头 Lead Connector	电缆引入长度 Cable Entry Length	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 INSULATION CLEARANCE	最大爬电距离 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	接地长度 Earth Lenth	芯体直径 Core Diameter	高度 Height	直径 Diameter						
		L	a1	a2×a3	n1×Ød1	δ1	L1	D2	L4	D3	D6	n2×Ød2	L5	δ2	L2	L3	D4	Z	X	D1	D5	D7	L6		
BT701	QXFBRGW-145/630-4	2625	40	80×80	4×Φ14	12	1400	290	150	350	400	6×Φ24	120	20	790	0	165	60	140	139	40	28	2390	135
BT707	QXFBRGWD-L-145/630-4	2795	40	80×80	4×Φ14	12	1400	290	150	350	400	6×Φ24	120	20	960	400	165	60	140	139	40	28	2560	135
BT708	QXFBRGWD-L-145/630-4	2945	40	80×80	4×Φ14	12	1400	290	150	350	400	6×Φ24	120	20	1110	550	165	60	140	139	40	28	2710	140
BT715	QXFBRGWD-L-145/1250-4	2840	50	100×100	4×Φ18	14	1400	290	150	350	400	6×Φ24	120	20	960	400	165	60	140	139	40	32	2560	130
BT716	QXFBRGWD-L-145/1250-4	2990	50	100×100	4×Φ18	14	1400	290	150	350	400	6×Φ24	120	20	1110	550	165	60	140	139	40	32	2710	135
BT801	QXFBRGW-170/630-4	2945	40	80×80	4×Φ14	12	1600	420	200	350	400	6×Φ24	140	25	860	0	185	70	150	139	40	28	2710	165
BT807	QXFBRGWD-L-170/630-4	3090	40	80×80	4×Φ14	12	1600	420	200	350	400	6×Φ24	140	25	1005	400	185	70	150	139	40	28	2855	165
BT808	QXFBRGWD-L-170/630-4	3240	40	80×80	4×Φ14	12	1600	420	200	350	400	6×Φ24	140	25	1155	550	185	70	150	139	40	28	3005	175
BT815	QXFBRGWD-L-170/1250-4	3135	50	100×100	4×Φ18	14	1600	420	200	350	400	6×Φ24	140	25	1005	400	185	70	150	155	40	32	2855	165
BT816	QXFBRGWD-L-170/1250-4	3285	50	100×100	4×Φ18	14	1600	420	200	350	400	6×Φ24	140	25	1155	550	185	70	150	155	40	32	3005	175

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

252–550kV玻璃钢电容式变压器套管（穿缆式）
252–550kV FRP capacitive Transformer Bushing (draw lead type)



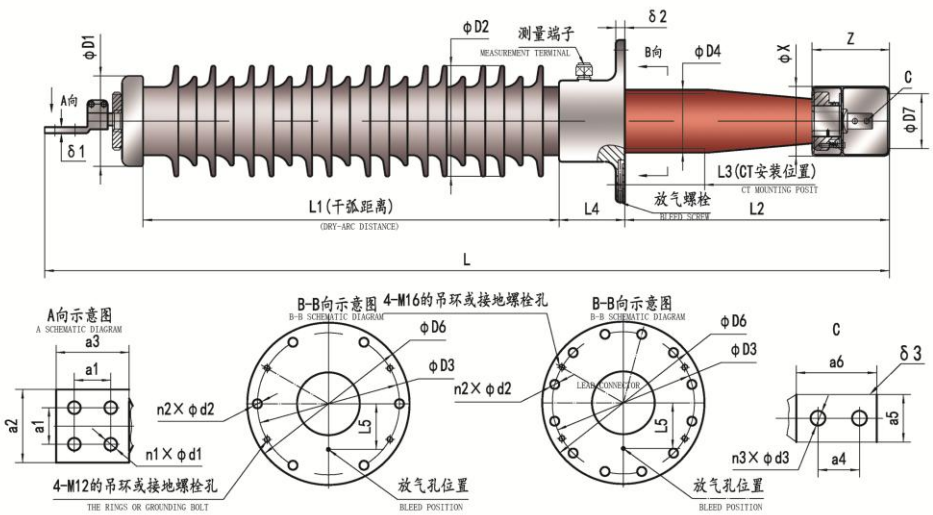


产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange							油纸芯体 Oil-end Core			油内均压球 Upper Equalizing Ball		将军帽直径 General's Socket Diameter	导管内径 Pipe Diameter	引线接头 Lead Connector	电缆引入长度 Cable Entry Length	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大爬电距离 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	接地长度 Earth Lenth	芯体直径 Core Diameter	高度 Height	直径 Diameter						
		L	a1	a2×a3	n1×Ød1	δ1	L1	D2	L4	D3	D6	n2×Ød2	L5	δ2	L2	L3	D4	Z	X	D1	D5	D7	L6		
BT906	QXFBRGWD-252/630-4	3670	40	80×80	4×Φ14	12	2210	490	260	500	550	12×Φ24	160	30	890	0	260	130	240	162	60	32	3410	350
BT907	QXFBRGWD-L-252/630-4	3870	40	80×80	4×Φ14	12	2210	490	260	500	550	12×Φ24	160	30	1090	200	260	130	240	162	60	32	3610	370
BT908	QXFBRGWD-L-252/630-4	4070	40	80×80	4×Φ14	12	2210	490	260	500	550	12×Φ24	160	30	1290	400	260	130	240	162	60	32	3810	400
BT909	QXFBRGWD-L-252/630-4	4170	40	80×80	4×Φ14	12	2210	490	260	500	550	12×Φ24	160	30	1390	500	260	130	240	162	60	32	3910	410
BT910	QXFBRGWD-L-252/630-4	4370	40	80×80	4×Φ14	12	2210	490	260	500	550	12×Φ24	160	30	1590	700	260	130	240	162	60	32	4110	430
BT916	QXFBRGWD-252/1250-4	3700	50	100×100	4×Φ18	16	2210	490	260	500	550	12×Φ24	160	30	890	0	260	130	240	162	60	35	3410	350
BT917	QXFBRGWD-L-252/1250-4	3900	50	100×100	4×Φ18	16	2210	490	260	500	550	12×Φ24	160	30	1090	200	260	130	240	162	60	35	3610	370
BT918	QXFBRGWD-L-252/1250-4	4100	50	100×100	4×Φ18	16	2210	490	260	500	550	12×Φ24	160	30	1290	400	260	130	240	162	60	35	3810	400
BT919	QXFBRGWD-L-252/1250-4	4200	50	100×100	4×Φ18	16	2210	490	260	500	550	12×Φ24	160	30	1390	500	260	130	240	162	60	35	3910	410
BT920	QXFBRGWD-L-252/1250-4	4400	50	100×100	4×Φ18	16	2210	490	260	500	550	12×Φ24	160	30	1590	700	260	130	240	162	60	35	4110	430
BT1008	QXFBRGWD-L-363/630-4	5660	40	80×80	4×Φ14	12	3100	565	270	600	650	16×Φ24	212	35	1950	400	360	200	300	380	70	32	5370	1230
BT1018	QXFBRGWD-L-363/1250-4	5660	50	100×100	4×Φ18	16	3100	565	270	600	650	16×Φ24	212	35	1950	400	360	200	300	380	70	35	5370	1230
BT1108	QXFBRGWD-L-420/630-4	6470	50	80×80	4×Φ14	12	3810	630	270	600	650	16×Φ24	250	35	2050	400	420	300	300	440	70	32	6180	1260
BT1118	QXFBRGWD-L-420/1250-4	6470	50	100×100	4×Φ18	16	3810	630	270	600	650	16×Φ24	250	35	2050	400	420	300	300	440	70	35	6180	1280
BT1208	QXFBRGWD-L-550/630-4	7220	50	80×81	4×Φ14	12	4300	630	300	750	800	16×Φ24	260	35	2280	400	440	300	350	470	70	32	6930	1300
BT1218	QXFBRGWD-L-550/1250-4	7220	50	100×101	4×Φ18	16	4300	630	300	750	800	16×Φ24	260	35	2280	400	440	300	350	470	70	35	6930	1320

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

高电压导杆式套管
High Voltage Guidebar Bushing

72.5–252kV玻璃钢电容式变压器套管（导杆式）
72.5–252kV FRP capacitive Transformer Bushing (guidebar type)



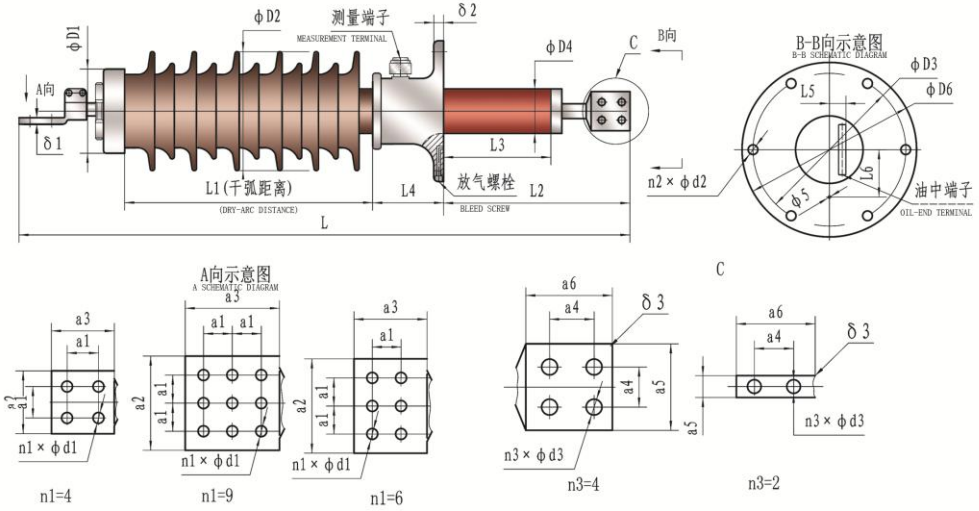
产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange								油纸芯体 Oil-end Core			油内均压球 Upper Equalizing Ball			油纸接线端子 Oil-end Wiring Terminal				将军帽直径 General's Socket Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	接地长度 Earth Lenth	芯体直径 Core Diameter	高度 Height	直径 Diameter	口径 aperture	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness				
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L5	δ2	L2	L3	D4	Z	X	D7	a4	a5×a6	n3×Φd3	δ3	D1		
BT5007	QXFBRGWD-L-72.5/2000-4	1955	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	865	400	120	200	180	140	45	65×95	2×Φ14	20	139	105	
BT5008	QXFBRGWD-L-72.5/2000-4	2105	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	1015	550	120	200	180	140	45	65×95	2×Φ14	20	139	110	
BT5015	QXFBRGWD-L-72.5/2500-4	1975	60	120×120	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	865	400	120	200	180	140	45	80×95	4×Φ14	20	139	130	
BT5016	QXFBRGWD-L-72.5/2500-4	2125	60	120×120	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	1015	550	120	200	180	140	45	80×95	4×Φ14	20	139	135	
BT6007	QXFBRGWD-L-126/2000-4	2545	50	100×100	4×Φ18	18	1150	290	150	350	400	6×Φ24	105	20	975	400	150	200	180	140	45	65×95	2×Φ14	20	139	150	
BT6008	QXFBRGWD-L-126/2000-4	2695	50	100×100	4×Φ18	18	1150	290	150	350	400	6×Φ24	105	20	1125	550	150	200	180	140	45	65×95	2×Φ14	20	139	155	
BT6015	QXFBRGWD-L-126/2500-4	2565	60	120×120	4×Φ18	20	1150	290	150	350	400	6×Φ24	105	20	975	400	150	200	180	140	45	80×95	2×Φ14	20	139	170	
BT6016	QXFBRGWD-L-126/2500-4	2715	60	120×120	4×Φ18	20	1150	290	150	350	400	6×Φ24	105	20	1125	550	150	200	180	140	45	80×95	2×Φ14	20	139	175	
BT7001	QXFBRGW-145/2000-4	2735	50	100×100	4×Φ18	18	1400	290	150	350	400	6×Φ24	120	20	915	0	165	200	180	140	45	65×95	2×Φ14	20	139	155	
BT7007	QXFBRGWD-L-145/2000-4	2970	50	100×100	4×Φ18	18	1400	290	150	350	400	6×Φ24	120	20	1150	400	165	200	180	140	45	65×95	2×Φ14	20	139	160	
BT7008	QXFBRGWD-L-145/2000-4	3120	50	100×100	4×Φ18	18	1400	290	150	350	400	6×Φ24	120	20	1300	550	165	200	180	140	45	65×95	2×Φ14	20	139	165	
BT7015	QXFBRGWD-L-145/2500-4	2970	60	120×120	4×Φ18	20	1400	290	150	350	400	6×Φ24	120	20	1150	400	165	200	180	140	45	80×95	4×Φ14	20	139	175	
BT7016	QXFBRGWD-L-145/2500-4	3120	60	120×120	4×Φ18	20	1400	290	150	350	400	6×Φ24	120	20	1300	550	165	200	180	140	45	80×95	4×Φ14	20	139	180	
BT8001	QXFBRGW-170/2000-4	2875	50	100×100	4×Φ18	18	1600	420	200	350	400	6×Φ24	140	25	985	0	185	200	180	120	45	65×95	2×Φ14	20	139	230	
BT8007	QXFBRGWD-L-170/2000-4	3110	50	100×100	4×Φ18	18	1600	420	200	350	400	6×Φ24	140	25	1220	400	185	200	180	120	45	65×95	2×Φ14	20	139	240	
BT8015	QXFBRGWD-L-170/2500-4	3130	60	120×120	4×Φ18	20	1600	420	200	350	400	6×Φ24	140	25	1220	400	185	200	180	120	45	80×95	4×Φ14	20	139	255	
BT8016	QXFBRGWD-L-170/2500-4	3280	60	120×120	4×Φ18	20	1600	420	200	350	400	6×Φ24	140	25	1370	550	185	200	180	120	45	80×95	4×Φ14	20	139	265	
BT9008	QXFBRGWD-L-252/2000-4	3830	50	100×100	4×Φ18	18	2210	490	260	500	550	12×Φ24	160	30	1350	400	255	200	260	150	45	65×95	2×Φ14	20	162	480	
BT9009	QXFBRGWD-L-252/2000-4	3930	50	100×100	4×Φ18	18	2210	490	260	500	550	12×Φ24	160	30	1450	500	255	200	260	150	45	65×95	2×Φ14	20	162	490	
BT9018	QXFBRGWD-L-252/2500-4	3850	60	120×120	4×Φ18	20	2210	490	260	500	550	12×Φ24	160	30	1350	400	255	200	260	150	45	80×95	4×Φ14	20	162	490	
BT9019	QXFBRGWD-L-252/2500-4	3950	60	120×120	4×Φ18	20	2210	490	260	500	550	12×Φ24	160	30	1450	500	255	200	260	150	45	80×95	4×Φ14	20	162	500	

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

电容式瓷外套变压器套管
Capacitance ceramic coat of transformer bushing

24kV导杆玻璃钢变压器套管
24kV Guide FRP transformer bushing



产品代号 Product Code	型号规格 Specificaton	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange							油纸芯体 Oil-end Core			油纸接线端子 Oil-end Wiring Terminal					上均压球直径 Upper Equalizing Ball Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	油纸绝缘距离 Oil-end Insulation clearance	芯体直径 Core Diameter	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	偏移量 Offset			
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L6	δ3	L2	L3	D4	a4	a5×a6	n3×Φd3	δ3	L5	D1		
CBT2001	QXBRGW-24/800-4	900	40	80×80	4×Φ14	12	340	280	100	190	220	6×Φ14	60	18	235	100	70	30	60×60	4×Φ14	10	25	178	20	
CBT2002	QXBRGW-24/1000-4	900	40	80×80	4×Φ14	12	340	280	100	190	220	6×Φ14	60	18	235	100	70	30	60×60	4×Φ14	10	25	178	30	
CBT2003	QXBRGW-24/1250-4	900	40	80×80	4×Φ14	14	340	280	100	190	220	6×Φ14	60	18	235	100	70	30	60×60	4×Φ14	10	25	178	30	
CBT2004	QXBRGW-24/1600-4	980	50	100×100	4×Φ18	16	340	280	100	190	220	6×Φ14	60	18	285	100	85	40	80×80	4×Φ14	14	35	178	30	
CBT2005	QXBRGW-24/2000-4	980	50	100×100	4×Φ18	18	340	280	100	190	220	6×Φ14	60	18	285	100	85	40	80×80	4×Φ14	14	35	178	30	
CBT2006	QXBRGW-24/2500-4	1020	50	120×120	4×Φ18	20	340	280	100	190	220	6×Φ14	60	18	285	100	85	40	80×80	4×Φ14	16	35	178	35	
CBT2007	QXBRGW-24/3150-4	1045	50	120×120	4×Φ18	20	340	280	100	190	220	6×Φ14	60	18	310	100	85	50	100×100	4×Φ18	16	40	178	35	
CBT2008	QXBRGW-24/4000-4	1020	50	150×155	9×Φ18	20	340	280	100	190	220	6×Φ14	60	18	290	100	100	45	80×90	4×Φ14	20	0	178	45	
CBT2009	QXBRGW-24/5000-4	1030	50	150×155	9×Φ18	20	340	280	100	190	220	6×Φ14	60	18	240	100	100	50	100×100	4×Φ18	25	0	178	45	
CBT2010	QXBRGW-24/6300-4	1085	60	180×125	6×Φ18	20	340	290	100	250	290	6×Φ18	90	18	290	100	120	60	120×130	4×Φ18	20	0	200	45	
CBT2011	QXBRGW-24/8000-4	1110	60	180×145	6×Φ18	20	340	290	100	250	290	6×Φ18	90	18	315	100	125	60	120×150	4×Φ18	20	0	200	45	

注：非电容型套管只是产品型号中无RG，无测量端子，外形尺寸与同规格套管相同。

Note: non capacitance type bushing is no RG in the product model, no measurement terminals, the size of the same size with the same casing.

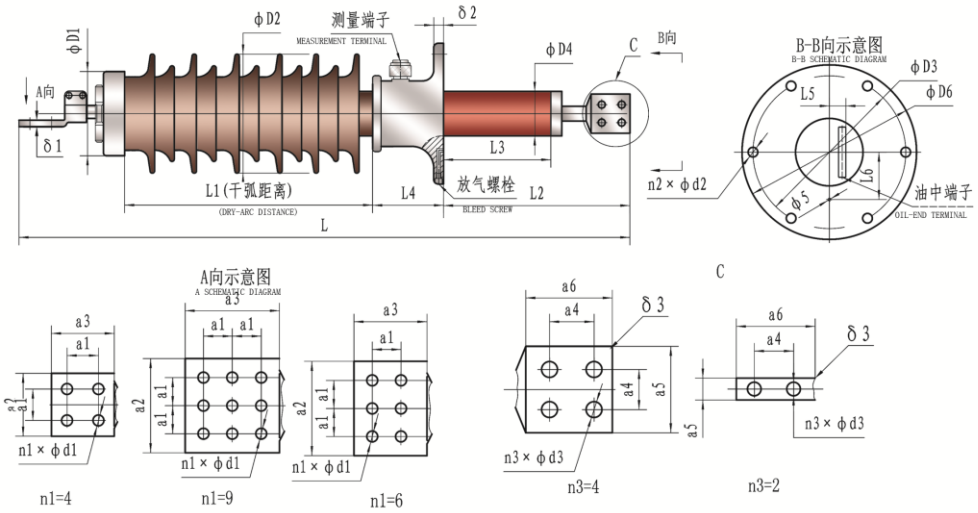
注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

电容式瓷外套变压器套管
Capacitance ceramic coat of transformer bushing

40.5kV导杆式玻璃钢变压器套管

40.5kV Guide FRP transformer bushing



产品代号 Product Code	型号规格 Specification	总长 Total Length	空气端接线端子 Air Wiring Terminal				户外伞裙 Outdoor Creepage Extender		安装法兰 Mounting Flage						油端芯体 Oil-end Core			油端接线端子 Oil-end Wiring Terminal						上均压球直径 Upper Equalizing Ball Diameter	重量 Weight kg
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔距 Holes Number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Diatence	外径 Hole diameter	孔数×孔距 Holes Number Holes Diameter	放气孔位置 Vent Hole Position	法兰厚度 Thickness	总长 Total length	油端绝缘距离 Oil-end Insulation Clearance	芯体直径 Core Diameter	孔距 Hole distance	板面尺寸 Board size	孔数×孔距 Holes Number Holes Diameter	板厚 Thickness	偏移量 Offset			
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L6	δ2	L2	L3	D4	a4	a5×a6	n3×Φd3	δ3	L5	D1		
CBT3001	QXBRGW-40.5/800-4	1090	40	80×85	4×Φ14	12	480	220	100	190	220	6×Φ14	60	18	285	140	85	30	60×60	4×Φ13	10	25	103	35	
CBT3002	QXBRGW-40.5/1000-4	1090	40	80×85	4×Φ14	12	480	220	100	190	220	6×Φ14	60	18	285	140	85	30	60×60	4×Φ13	10	25	103	45	
CBT3003	QXBRGW-40.5/1250-4	1090	40	80×85	4×Φ14	12	480	220	100	190	220	6×Φ14	60	18	285	140	85	30	60×60	4×Φ13	10	25	103	45	
CBT3004	QXBRGW-40.5/1600-4	1155	50	100×105	4×Φ14	16	480	220	100	190	220	6×Φ14	60	18	320	140	100	40	80×80	4×Φ14	14	35	118	45	
CBT3005	QXBRGW-40.5/2000-4	1155	50	100×105	4×Φ18	16	480	220	100	190	220	6×Φ14	60	18	320	140	100	40	80×80	4×Φ14	14	35	118	45	
CBT3006	QXBRGW-40.5/2500-4	1155	60	120×120	4×Φ18	20	400	220	100	190	220	6×Φ14	60	18	360	140	100	50	100×100	4×Φ18	16	40	118	50	
CBT3007	QXBRGW-40.5/3150-4	1155	60	120×120	4×Φ18	20	400	220	100	190	220	6×Φ14	60	18	360	140	100	50	100×100	4×Φ18	16	40	118	50	
CBT3008	QXBRGW-40.5/4000-4	1115	50	150×155	9×Φ18	20	400	220	100	190	220	6×Φ14	60	18	265	140	105	45	80×90	4×Φ14	20	0	125	60	
CBT3009	QXBRGW-40.5/5000-4	1130	50	150×155	9×Φ18	20	400	220	100	190	220	6×Φ14	60	18	280	140	115	50	100×100	4×Φ18	25	0	133	70	
CBT3010	QXBRGW-40.5/6300-4	1185	60	180×125	6×Φ18	20	400	290	100	250	290	6×Φ18	90	18	330	140	125	60	120×150	4×Φ18	20	0	143	75	
CBT3011	QXBRGW-40.5/8000-4	1185	60	180×145	6×Φ18	20	400	290	100	250	290	6×Φ18	90	18	330	140	125	60	120×150	4×Φ18	30	0	143	80	

注：非电容型套管只是产品型号中无RG,无测量端子，外形尺寸与同规格套管相同。

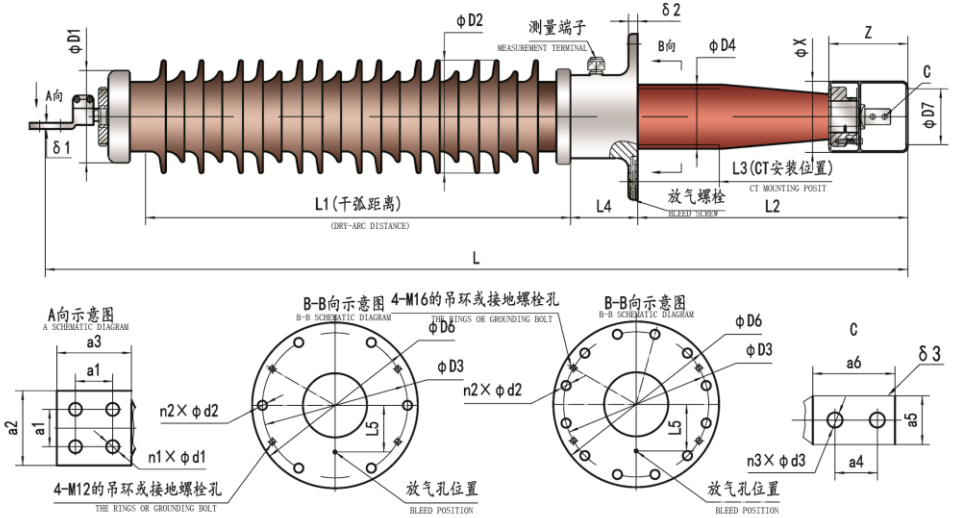
Note: non capacitance type bushing is no RG in the product model, no measurement terminals, the size of the same size with the same casing.

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

72.5–252kV导杆式玻璃钢变压器套管

72.5–252kV Guide FRP transformer bushing

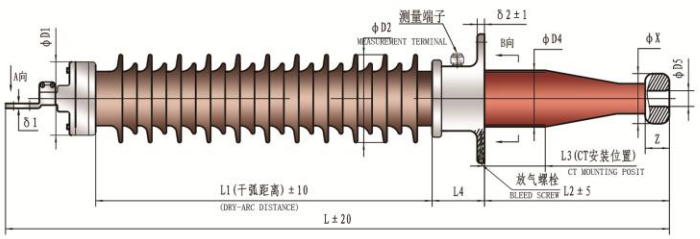


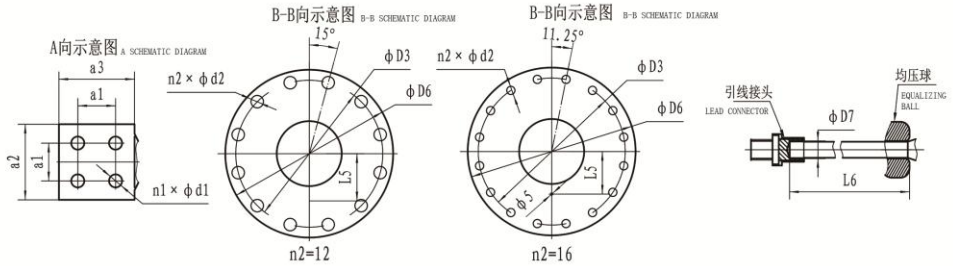
产品代号 Product Code	型号规格 Specification	总长 Total Length	空气接线端子 Air Wiring Terminal				户外伞裙 Outdoor Creepage Extender		安装法兰 Mounting Flange						油端芯体 Oil-end Core			油端均压球 Oil-end Equalizing Ball			油端接线端子 Oil-end Wiring Terminal						接地安装直径 General s Socket Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔距 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Diatence	外径 Hole diameter	孔数×孔距 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	接地长度 Earth Lenth	芯体直径 Core Diameter	高度 Height	直径 Diameter	口径 Aperture	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔距 Holes number Holes Diameter	板厚 Thickness			
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L5	δ2	L2	L3	D4	Z	X	D7	a4	a5×a6	n3×Φd3	δ3	D1		
CBT5007	QXBRGWD-L-72.5/2000-4	1955	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	865	400	120	200	180	140	45	65×95	2×Φ14	20	139	105	
CBT5008	QXBRGWD-L-72.5/2200-4	2105	50	100×100	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	1015	550	120	200	180	140	45	65×95	2×Φ14	20	139	110	
CBT5015	QXBRGWD-L-72.5/2500-4	1975	60	120×120	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	865	400	120	200	180	140	45	80×95	4×Φ14	20	139	130	
CBT5016	QXBRGWD-L-72.5/2500-4	2125	60	120×120	4×Φ18	16	700	290	120	280	330	6×Φ18	90	18	1015	550	120	200	180	140	45	80×95	4×Φ14	20	139	135	
CBT6007	QXBRGWD-L-126/2000-4	2535	50	100×100	4×Φ18	18	1140	290	150	350	400	6×Φ24	105	20	975	400	150	200	180	140	45	65×95	2×Φ14	20	139	150	
CBT6008	QXBRGWD-L-126/2000-4	2685	50	100×100	4×Φ18	18	1140	290	150	350	400	6×Φ24	105	20	1125	550	150	200	180	140	45	65×95	2×Φ14	20	139	155	
CBT6015	QXBRGWD-L-126/2500-4	2555	60	120×120	4×Φ18	20	1140	290	150	350	400	6×Φ24	105	20	975	400	150	200	180	140	45	80×95	2×Φ14	20	139	170	
CBT6016	QXBRGWD-L-126/2500-4	2705	60	120×120	4×Φ18	20	1140	290	150	350	400	6×Φ24	105	20	1125	550	150	200	180	140	45	80×95	2×Φ14	20	139	175	
CBT7001	QXBRGW-145/2000-4	2635	50	100×100	4×Φ18	18	1300	290	150	350	400	6×Φ24	120	20	915	0	165	200	180	140	45	65×95	2×Φ14	20	139	155	
CBT7007	QXBRGWD-L-145/2000-4	2870	50	100×100	4×Φ18	18	1300	290	150	350	400	6×Φ24	120	20	1150	400	165	200	180	140	45	65×95	2×Φ14	20	139	160	
CBT7008	QXBRGWD-L-145/2000-4	3020	50	100×100	4×Φ18	18	1300	290	150	350	400	6×Φ24	120	20	1300	550	165	200	180	140	45	65×95	2×Φ14	20	139	165	
CBT7015	QXBRGWD-L-145/2500-4	2870	60	120×120	4×Φ18	20	1300	290	150	350	400	6×Φ24	120	20	1150	400	165	200	180	140	45	80×95	4×Φ14	20	139	175	
CBT7016	QXBRGWD-L-145/2500-4	3020	60	120×120	4×Φ18	20	1300	290	150	350	400	6×Φ24	120	20	1300	550	165	200	180	140	45	80×95	4×Φ14	20	139	180	
CBT8001	QXBRGW-170/2000-4	2875	50	100×100	4×Φ18	18	1600	420	200	350	400	6×Φ24	140	25	985	0	185	200	180	120	45	65×95	2×Φ14	20	139	230	
CBT8007	QXBRGWD-L-170/2000-4	3110	50	100×100	4×Φ18	18	1600	420	200	350	400	6×Φ24	140	25	1220	400	185	200	180	120	45	65×95	2×Φ14	20	139	240	
CBT8015	QXBRGWD-L-170/2500-4	3130	60	120×120	4×Φ18	20	1600	420	200	350	400	6×Φ24	140	25	1220	400	185	200	180	120	45	80×95	4×Φ14	20	139	255	
CBT8016	QXBRGWD-L-170/2500-4	3280	60	120×120	4×Φ18	20	1600	420	200	350	400	6×Φ24	140	25	1370	550	185	200	180	120	45	80×95	4×Φ14	20	139	265	
CBT9008	QXBRGWD-L-252/2000-4	3860	50	100×100	4×Φ18	18	2240	490	260	500	550	12×Φ24	160	30	1350	400	255	200	260	150	45	65×95	2×Φ14	20	162	480	
CBT9009	QXBRGWD-L-252/2000-4	3960	50	100×100	4×Φ18	18	2240	490	260	500	550	12×Φ24	160	30	1450	500	255	200	260	150	45	65×95	2×Φ14	20	162	490	
CBT9018	QXBRGWD-L-252/2500-4	3880	60	120×120	4×Φ18	20	2240	490	260	500	550	12×Φ24	160	30	1350	400	255	200	260	150	45	80×95	4×Φ14	20	162	490	
CBT9019	QXBRGWD-L-252/2500-4	3980	60	120×120	4×Φ18	20	2240	490	260	500	550	12×Φ24	160	30	1450	500	255	200	260	150	45	80×95	4×Φ14	20	162	500	

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

24–550kV穿缆式玻璃钢变压器套管
24–550kV FRP capacitive Transformer Bushing (draw lead type)

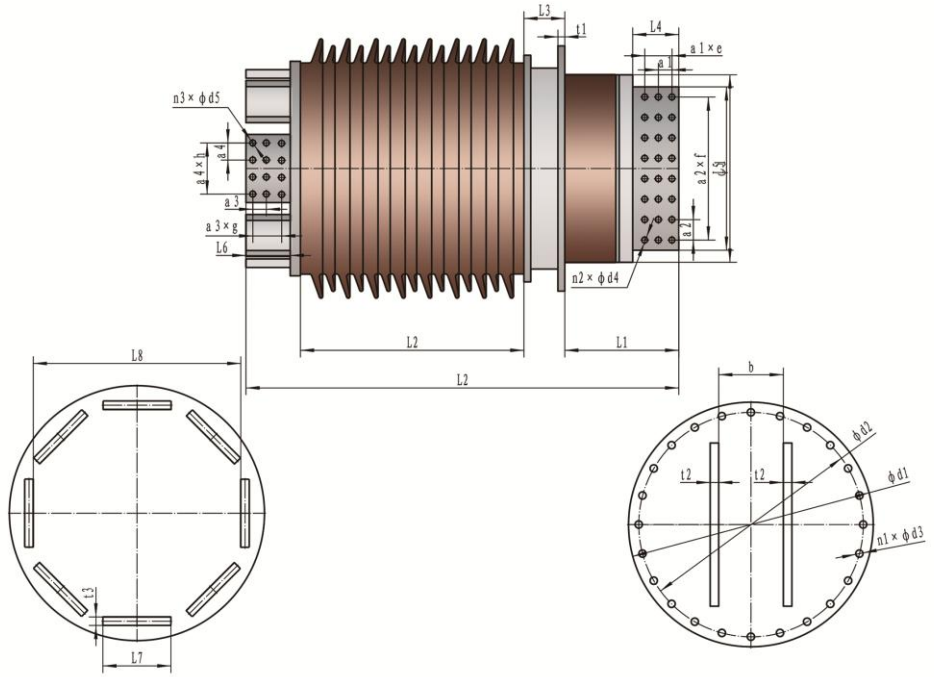




产品代号 Product Code	型号规格 Specification	总长 Total Length	空气侧接线子 Air Wiring Terminal			户外瓷外套伞裙 Outdoor Creepage Extender		安装法兰 Mounting Flage						油纸芯体 Oil-end Core			均压环 Upper Equalizing Ball		接地端子外径 General's socket diamter	导管内径 Pipe Diameter	引线接头内孔 Lead Connector	电缆引入长度 Cable Entry Length	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes Number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distence	外径 Hole diameter	孔数×孔径 Holes Number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total length	接地长度 Earth Length	芯体直径 Core Diameter	高度 height	直径 Diameter				
		L	a1	a2×a3	n1×Φd1	δ1	L1	D2	L4	D3	D6	n2×Φd2	L5	δ2	L2	L3	D4	Z	X	D1	D5	D7	L6	
CBT201	QXBRGW-24/630-4	743	40	80×80	4×Φ14	12	340	280	100	190	220	6×Φ14	60	18	325	0	116	60	125	190	40	28	815	40
CBT205	QXBRGW-24/1250-4	743	40	80×80	4×Φ14	12	340	280	100	190	220	6×Φ14	60	18	130	0	100	30	90	178	40	28	650	40
CBT301	QXBRGW-40.5/630-4	883	40	80×80	4×Φ14	12	480	280	100	190	220	6×Φ14	60	18	130	0	100	30	90	178	40	28	650	40
CBT303	QXBRGW-L-40.5/630-4	883	40	80×80	4×Φ14	12	480	280	100	190	220	6×Φ14	60	18	180	0	100	30	90	178	40	28	700	58
CBT305	QXBRGW-40.5/1250-4	883	40	80×80	4×Φ14	12	480	280	100	190	220	6×Φ14	60	18	430	250	100	30	90	178	40	28	950	58
CBT404	QXBRGW-L-52/630-4	883	40	80×80	4×Φ14	12	480	280	100	190	220	6×Φ14	60	18	180	0	100	30	90	178	40	32	700	60
CBT505	QXBRGWD-72.5/630-4	1460	40	80×80	4×Φ14	12	700	294	150	280	330	6×Φ18	90	18	325	0	120	60	125	190	40	28	1225	98
CBT507	QXBRGWD-L-72.5/630-4	1860	40	80×80	4×Φ14	12	700	294	150	280	330	6×Φ18	90	18	725	400	120	60	125	190	40	28	1625	108
CBT515	QXBRGWD-L-72.5/1250-4	1905	50	100×100	4×Φ18	16	700	294	150	280	330	6×Φ18	90	18	725	400	120	60	125	190	40	32	1625	123
CBT517	QXBRGWD-L-72.5/1250-4	1905	50	100×100	4×Φ18	16	700	355	150	280	330	6×Φ18	90	18	725	400	135	60	125	220	60	35	1625	123
CBT607	QXBRGWD-L-126/630-4	2440	40	80×80	4×Φ14	12	1140	355	180	350	400	6×Φ24	105	20	835	400	150	60	125	225	40	28	2205	180
CBT615	QXBRGWD-L-126/1250-4	2485	50	100×100	4×Φ18	16	1140	355	180	350	400	6×Φ24	105	20	835	400	150	60	125	225	40	32	2205	190
CBT617	QXBRGWD-L-126/1250-4	2485	50	100×100	4×Φ18	16	1140	355	180	350	400	6×Φ24	105	20	835	400	165	60	125	245	60	35	2205	190
CBT707	QXBRGWD-L-145/630-4	2830	50	100×100	4×Φ18	16	1360	365	180	350	400	6×Φ24	105	20	960	400	165	60	125	245	40	35	2550	248
CBT807	QXBRGWD-L-145/630-4	3250	50	100×100	4×Φ18	16	1570	385	180	350	400	6×Φ24	105	20	1170	400	185	60	125	380	40	35	2490	330
CBT908	QXBRGWD-L-252/630-4	4225	40	80×80	4×Φ14	12	2240	440	305	500	550	12×Φ24	195	30	1290	400	255	130	240	425	60	32	3885	750
CBT918	QXBRGWD-L-252/1250-4	4255	50	100×100	4×Φ18	16	2240	440	305	500	550	12×Φ24	195	30	1290	400	255	130	240	425	60	35	3885	760
CBT1008	QXBRGWD-L-363/630-4	6740	40	80×80	4×Φ14	12	3740	587	480	600	650	16×Φ24	212	35	2130	650	360	280	280	375	70	28	6400	1250
CBT1018	QXBRGWD-L-363/1250-4	6770	50	100×100	4×Φ14	12	3740	587	480	600	650	16×Φ24	212	35	2130	650	360	280	280	375	70	32	6400	1250
CBT1218	QXBRGWD-L-550/1250-4	7720	50	100×100	4×Φ14	12	4685	686	565	750	800	16×Φ24	260	35	2080	400	440	280	330	375	70	32	7380	2400

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

QXHCBRGW大电流套管
QXHCBRGW Large Current Bushing



产品代号 Product Code	产品型号 Specification	导体材质 Conductor material	最小公称爬距 Minimum Creepage Distance	总长 Total Length	干弧长 Dry arc length	油中尺寸 Size in Oil		安装法兰 Mounting Flange					油中接线端子 Oil Side Terminal						空气中接线端子 Air Wiring Terminal					
						油中总长 Oil Length	油中最大直径 Maximum Diameter In Oil	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数|孔数 Holes number Holes Diameter	高度 Height	厚度 Thickness	孔数|孔数 Holes number Holes Diameter	螺孔|螺数|数 Screw Quantity	孔距 Hole Distance	板面 Board Size	板厚 Thickness	两板间距 Distance of Board	孔数|孔数 Holes number Holes Diameter	螺孔|螺数|数 Screw Quantity	孔距 Hole Distance	板面 Board Size	板厚 Thickness	两板间距 Distance of Board
				L	L2	L1	d	d2	d1	n1×d3	L3	t1	n2×d4	e×f	a1×a2	L4×L5	t2	L7	n3×d5	g×h	a3×a4	L6×L7	t3	L8
HC24125L	QXHCBRGW-24/12500-4	铝	800	1040	345	395	300	450	500	10×24	120	25	16×14	2×4	40×40	115×150	35	130	72×18	3×3	50×40	160×115	28	304
HC24160L	QXHCBRGW-24/16000-4	铝	950	1105	363	405	380	490	540	10×24	120	25	16×14	2×4	40×40	115×150	35	130	72×18	3×3	50×40	160×115	28	304
HC24200L	QXHCBRGW-24/20000-4	铝	1016	1170	363	492	400	550	600	12×20	120	25	16×18	2×4	50×50	215×200	30	120	48×18	3×2	50×50	163×160	28	330
HC24250L	QXHCBRGW-24/25000-4	铝	1016	1170	363	492	400	550	600	12×20	120	25	16×18	2×4	50×50	215×200	30	120	48×18	3×2	50×50	163×160	28	330
HC24315L	QXHCBRGW-24/31500-4	铝	1016	1170	363	492	400	550	600	12×20	120	25	16×18	2×4	50×50	215×200	30	120	48×18	3×2	50×50	163×160	28	330
HC35125L	QXHCBRGW-40.5/12500-4	铝	950	1105	363	405	380	490	540	10×24	120	25	16×14	2×4	40×40	115×150	35	130	72×18	3×3	50×40	160×115	28	304
HC35160L	QXHCBRGW-40.5/16000-4	铝	1386	1292	530	425	380	490	540	10×24	120	25	16×14	2×4	40×40	115×150	35	130	72×18	3×3	50×40	160×115	28	304
HC35200L	QXHCBRGW-40.5/20000-4	铝	1418	1180	450	415	400	550	600	12×20	120	25	16×18	2×4	50×50	215×200	30	120	72×18	3×3	50×50	163×183	28	385
HC35250L	QXHCBRGW-40.5/25000-4	铝	1600	1251	450	482	490	620	680	18×22	120	25	30×18	3×5	50×50	175×285	40	140	72×18	3×3	50×56	165×200	27	440
HC35315L	QXHCBRGW-40.5/31500-4	铝	1510	1585	580	622	600	830	870	18×22	120	32	48×18	3×8	50×50	250×400	40	160	96×18	3×4	60×60	220×240	30	710

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

QXFGRBG(L)型玻璃钢电容式油–SF6干式变压器套管
QXFBRGW(L) FRP Capacitive Oil – SF6 Dry-Type Transformer Bushing

型号说明 Description:

QX F G R BG – (L) – XXX / XXX

- 额定电流 rated current
- 额定电压 rated voltage
- 带CT安装位 installation position with CT
- 油–SF6型变压器套管 oil SF6 type capacitive transformer bushing
- 电容式 capacitance
- 干式 dry type
- 复合绝缘 complex insulation
- 七星 qixing

产品主要技术性能指标 Main technical index

系统标称电压（kV）Nominal voltage		66	110	220	330	500
额定电压（设备最高电压）（kV）Rated voltage (the highest voltage of the equipment)		72.5	126	252	363	550
工频耐受电压（kV/min）Frequency with stand voltage		155	255	505	625	750
雷电冲击耐受电压（kV）Thunder impulse with stand voltge	全波 Whole wave	325	550	1050	1175	1800
	截波 Intercepled wave	357.5	605	1155	1292.5	1980
操作冲击耐受电压（kV）Switching impulse wet with stand voltage		–	–	850	950	1300
介质损耗因数 dielectric dissipation factor	最大值 Maximum	1.05Um/ √3 下不大于0.4% At 1.05Um,the lower limit should not be over 0.4%.				
	增值 Increment	1.05Um/ √3 到Um间变化不大于0.1% At 1.05Um,the cariation to Um should not be over 0.1%				
试验抽头绝缘水平（kV/min）test tap insulation level		3				
局部放电水平（pC）local discharge	Um	≤10				
	1.05Um/ √3	≤5				
密封性试验 leakage test		0.3MPa/20min无泄漏 0.3MPa/20min without leakage				
		0.65MPa/20min无泄漏 0.3MPa/20min without leakage				
热短时电流 thermal short time current		套管额定电流的25倍，持续时间2S 25 times of the bushing rated current,and lasts 2S.				
额定频率（Hz）rated frequency		50				

套管的适用环境 Suitable environment for the bushings:

环境温度：适用于最高温度不超过+50℃，最低温度不低于–50℃，当超过该温度范围时，技术条件由双方另议；

安装角度：可任意角度安装；

environment temperature：the maximum temperature should not be over 50℃ and the minimum temperature should not be lower than –50℃.When the temperature is beyond this range, technical terms should be negotiated by both parties otherwise.

Installation angle：any angle will do.

订货须知 Order tips:

电气参数：额定电压、额定电流、额定频率、油端长度、CT安装位长度（很重要）、SF6端长度。

环境参数：环境温度、海拔高度、污秽等级。

注：套管法兰和接线端子的尺寸可以根据变压器制造商的要求进行特殊设计，也可对用户原有套管提供替代品。

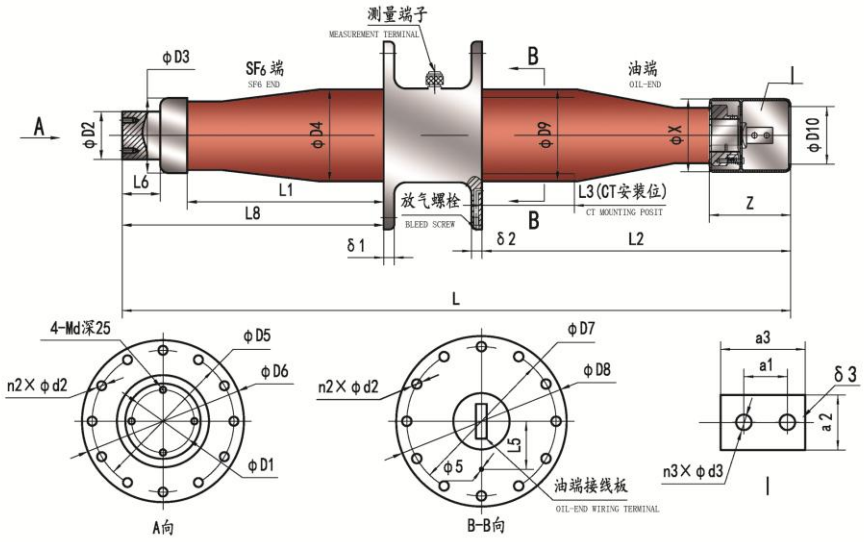
Electrical parameters：rated voltage, rated current, rated frequency, 油端长度length of the oil end, CT mounting position length (very important), length of SF 6 end.

Environment parameter:temperature, elevation, contaminationlevel.

Notes: the size of bushing flange and wiring terminal can be specifically designed and substitute for existing bushing can also be supplied.

油–SF6套管
Oil – SF6 Transformer Bushing

72.5–550kV玻璃钢电容式油–SF6干式变压器套管
72.5–550kV FRP Capacitive Oil–SF6 Dry-Type Transformer Bushing



产品代号 Product Code	型号规格 Specification	总长 Total Length	SF6侧法兰 SF6 Wiring Socket				SF6绝缘芯体 SF6 core				SF6侧法兰 Sgs6 Flange				油侧法兰 Oil-end Flange				油侧芯体 Oil-end Core			油侧均压环 Oil-end Equalizing Ball			油侧接线端子 Oil-end Wiring Terminal				重量 Weight
			孔中心距 Hole Center Distance	螺孔直径 Screw Hole Diameter	接线座直径 Connector Seat Diameter	长度 length	总长 Total Length	绝缘海拔 Insulation Clearance	芯体直径 Core Diameter	均压球直径 Equalizing Ball Diameter	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	厚度 Thickness	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	CT安装位 CT Position	芯体直径 Core Diameter	高度 Height	直径 Diameter	口径 Aperture	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	
		L	D1	M4	D2	L6	L8	L1	D4	D3	D5	D6	n1×Φd1	δ1	D7	D8	n2×Φd2	L5	δ2	L2	L3	D9	Z	X	D10	a1	a2×a3	n3×Φd3	δ3	
OGT503	QXFGRBG-I-72.5/800	1345	70	M12	99	30	330	255	120	128	305	335	8×Φ16	20	280	335	6×Φ18	90	20	865	400	120	200	180	140	30	40×80	2×Φ13	12	75
OGT507	QXFGRBG-I-72.5/1250	1345	70	M12	99	30	330	255	120	128	305	335	8×Φ16	20	280	335	6×Φ18	90	20	865	400	120	200	180	140	30	40×80	2×Φ13	12	90
OGT511	QXFGRBG-I-72.5/2000	1345	70	M12	99	30	330	255	120	128	305	335	8×Φ16	20	280	335	6×Φ18	90	20	865	400	120	200	180	140	45	65×95	2×Φ13	14	100
OGT603	QXFGRBG-I-126/800	1695	70	M12	99	30	520	445	180	128	305	335	8×Φ16	25	350	400	6×Φ24	120	25	975	400	180	200	180	140	30	40×80	2×Φ13	12	140
OGT607	QXFGRBG-I-126/1250	1695	70	M12	99	30	520	445	180	128	305	335	8×Φ16	25	350	400	6×Φ24	120	25	975	400	180	200	180	140	30	40×80	2×Φ13	12	145
OGT611	QXFGRBG-I-126/2000	1695	70	M12	99	30	520	445	180	128	305	335	8×Φ16	25	350	400	6×Φ24	120	25	975	400	180	200	180	140	45	65×95	2×Φ13	14	155
OGT903	QXFGRBG-I-252/800	2705	110	M12	139	30	1095	1000	280	168	535	565	16×Φ16	30	450	500	12×Φ24	180	30	1360	400	280	200	260	150	30	40×80	2×Φ13	12	460
OGT908	QXFGRBG-I-252/1250	2705	110	M12	139	30	1095	1000	280	168	535	565	16×Φ16	30	450	500	12×Φ24	180	30	1360	400	280	200	260	150	30	40×80	2×Φ13	12	465
OGT913	QXFGRBG-L-252/2000	2705	110	M12	139	30	1095	1000	280	168	535	565	16×Φ16	30	450	500	12×Φ24	180	30	1360	400	280	200	260	150	45	65×95	2×Φ13	14	470
OGT1003	QXFGRBG-I-363/800	3590	110	M12	139	30	1330	1050	360	208	640	690	16×Φ16	35	600	650	16×Φ24	220	35	2000	400	360	300	300	150	30	40×80	2×Φ13	12	560
OGT1008	QXFGRBG-I-363/1250	3590	110	M12	139	30	1330	1050	360	208	640	690	16×Φ16	35	600	650	16×Φ24	220	35	2000	400	360	300	300	150	30	40×80	2×Φ13	12	560
OGT1013	QXFGRBG-L-363/2000	3590	110	M12	139	30	1330	1050	360	208	640	690	16×Φ16	35	600	650	16×Φ24	220	35	2000	400	360	300	300	150	45	65×95	2×Φ13	14	560
OGT1103	QXFGRBG-L-550/800	4270	110	M12	139	30	1650	1330	360	208	640	690	16×Φ16	35	750	800	16×Φ24	270	35	2320	400	460	350	350	150	30	40×80	2×Φ13	12	830
OGT1108	QXFGRBG-I-550/1250	4270	110	M12	139	30	1650	1330	360	208	640	690	16×Φ16	35	750	800	16×Φ24	270	35	2320	400	460	350	350	150	30	40×80	2×Φ13	12	840
OGT1113	QXFGRBG-L-550/2000	4270	110	M12	139	30	1650	1330	360	208	640	690	16×Φ16	35	750	800	16×Φ24	270	35	2320	400	460	350	350	150	45	65×95	2×Φ13	14	850

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

QXFGRBO(L)型玻璃钢电容式油–油干式变压器套管

QXFGRBO(L) FRP Capacitive Oil – Oil Dry–Type Transformer Bushing

型号说明 Description:

QXF G R BO – (L) – XXX / XXX

- 额定电流 rated current
- 额定电压 rated voltage
- 带CT安装位 installution position with CT
- 油–油型变压器套管 oil–oil type capacitive transformer bushing
- 电容式 capacitance
- 干式 dry type
- 复合绝缘 complex insulation
- 七星 qixing

产品主要技术性能指标 Main technical index

系统标称电压（kV）Nominal voltage		66	110	220	330	500
额定电压（设备最高电压）（kV）Rated voltage (the highest voltage of the equipment)		72.5	126	252	363	550
工频耐受电压（kV/min）Frequency with stand voltage		155	255	505	625	750
雷电冲击耐受电压（kV）Thunder impulse with stand voltge	全波 Whole wave	325	550	1050	1175	1800
	截波 Intercepled wave	357.5	605	1155	1292.5	1980
操作冲击耐受电压（kV）Switching impulse wet with stand voltage		–	–	850	950	1300
介质损耗因数 dielectric dissipation factor	最大值 Maximum	1.05Um/ √3 下不大于0.4% At 1.05Um,the lower limit should not be over 0.4%.				
	增值 Increment	1.05Um/ √3 到Um间变化不大于0.1% At 1.05Um,the cariation to Um should not be over 0.1%				
试验抽头绝缘水平（kV/min）test tap insulation level		3				
局部放电水平（pC）local discharge	Um	≤10				
	1.05Um/ √3	≤5				
密封性试验 leakage test		0.3MPa/20min无泄漏 0.3MPa/20min without leakage				
热短时电流 thermal short time current		套管额定电流的25倍，持续时间2S 25 times of the bushing rated current,and lasts 2S.				
额定频率（Hz）rated frequency		50				

套管的适用环境 Suitable environment for the bushings:

环境温度：适用于最高温度不超过+50℃，最低温度不低于–50℃，当超过该温度范围时，技术条件由双方另议；

安装角度：可任意角度安装；

environment temperature: the maximum temperature should not be over 50℃ and the minimum temperature should not be lower than –50℃.When the temperature is beyond this range, technical terms should be negotiated by both parties otherwise.

Installation angle:any angle will do.

订货须知 Order tips:

电气参数：额定电压、额定电流、额定频率、两个油端长度、CT安装位长度（很重要）、穿缆长度（很重要）。

环境参数：环境温度。

安装方式：是否需要提供测量端子，如需要则提供测量端子安装尺寸。

注：套管法兰和接线端子的尺寸可以根据变压器制造商的要求进行特殊设计，也可对用户原有套管提供替代品。

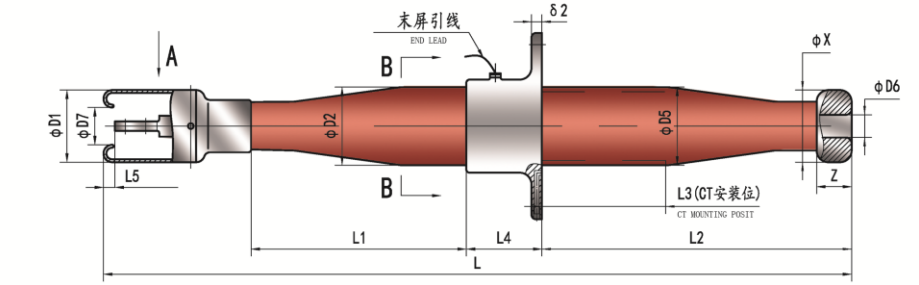
Electrical parameters: rated voltage, rated current, rated frequency, 油端长度length of two oil ends, CT mounting position length (very important), length of cable （very important.

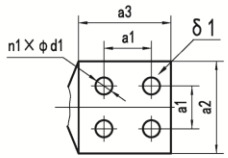
Environment parameter:environment temperature.

Mounting method:whether measure terminal is needed; if yes, the mounting size of the measurement terminal should be provided. Notes: the size of bushing flange and wiring terminal can be specifically designed and substitute for existing bushing can also be supplied.

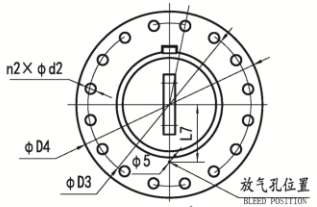
72.5–550kV玻璃钢电容式油–油干式变压器套管

72.5–550kV FRP Capacitive Oil–Oil Dry Transformer Bushing

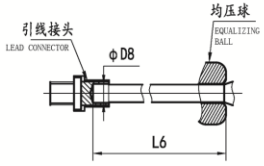




A向



B–B向



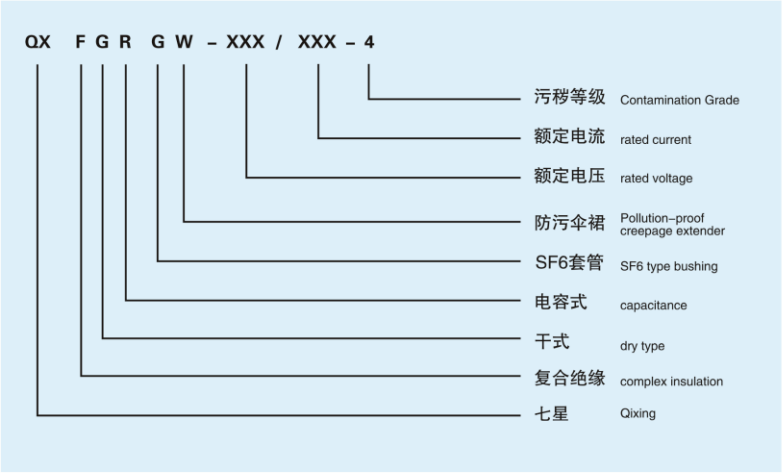
产品代号 Product Code	型号规格 Specification	总长 Total Length	均压罩 Equalizing Cover		接线端子 Air Wiring Terminal					变压器外壳体 Transformer Outer Core		安装法兰 Mounting Flange						变压器内壳体 Transformer Inner Core			均压球 Equalizing Ball		导管内径 Pipe Diameter	引线接头内孔 Lead Connector	电缆引入长度 Cable Entry Length	重量 Weight
			口径 Aperture	外径 Outer Diameter	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	位置 Position	电绝缘距 Insulation Clearance	芯体直径 Core Diameter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	放气孔位置 Vent Hole Position	厚度 Thickness	总长 Total Length	CT安装位 CT Position	芯体直径 Core Diameter	高度 Height	直径 Diameter				
		L	D7	D1	a1	a2×a3	n1×Φd1	δ1	L5	L1	D2	L4	D3	D4	n2×Φd2	L7	δ2	L2	L3	D5	Z	X	D6	D8	L6	
OT503	QXFGRBO-L-72.5/630	1375	140	180	45	80×80	4×Φ14	12	45	270	120	120	280	330	6×Φ18	90	18	665	400	120	60	125	40	28	1105	85
OT507	QXFGRBO-L-72.5/1250	1375	140	180	45	80×80	4×Φ14	12	25	270	120	120	280	330	6×Φ18	90	18	665	400	120	60	125	40	32	1105	90
OT603	QXFGRBO-L-126/630	1685	105	165	45	80×80	4×Φ14	12	45	440	170	150	350	400	6×Φ24	105	20	775	400	170	60	125	40	28	1415	100
OT607	QXFGRBO-L-126/1250	1685	105	165	45	80×80	4×Φ14	12	25	440	170	150	350	400	6×Φ24	105	20	775	400	170	60	125	40	32	1415	100
OT903	QXFGRBO-L-252/630	2690	150	260	45	80×80	4×Φ14	12	35	860	280	260	500	550	12×Φ24	160	30	1250	400	280	130	240	60	32	2420	445
OT908	QXFGRBO-L-252/1250	2690	150	260	45	80×80	4×Φ14	12	25	860	280	260	500	550	12×Φ24	160	30	1250	400	280	130	240	60	46	2420	450
OT1003	QXFGRBO-L-363/630	3970	200	300	45	80×80	4×Φ14	12	35	1350	360	270	600	650	16×Φ24	212	30	2050	400	360	280	280	70	46	3720	495
OT1008	QXFGRBO-L-363/1250	3970	200	300	45	100×100	4×Φ18	16	25	1350	360	270	600	650	16×Φ24	212	30	2050	400	360	280	280	70	46	3720	500
OT1103	QXFGRBO-L-550/630	4420	200	300	45	80×80	4×Φ14	12	35	1620	460	300	600	650	16×Φ24	260	35	2200	400	460	350	350	70	46	4170	495
OT1108	QXFGRBO-L-550/1250	4420	200	300	45	100×100	4×Φ18	16	25	1620	460	300	600	650	16×Φ24	260	35	2200	400	460	350	350	70	46	4170	500

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。

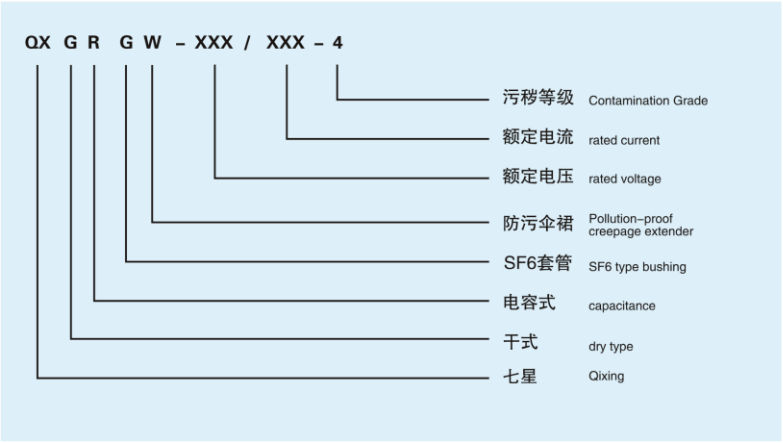
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

玻璃钢电容式GIS套管
FRP Capacitive GIS Bushing

玻璃钢电容式GIS套管型号说明 Description:



瓷外套玻璃钢电容式GIS套管型号说明 Description:



SF6–空气套管
Air bushing

产品主要技术性能指标 Main technical index

系统标称电压（kV） Nominal voltage		66	110	220	330	500
额定电压（设备最高电压）（kV） rated voltage (the highest voltage of the equipment)		72.5	126	252	363	550
工频耐受电压（kV/min） frequency with stand voltage	干 Dry	140	230	460	595	710
	湿 Wet	140	230	460	535	–
雷电冲击耐受电压（kV） Thunder impulse with stand voltage	全波 Whole wave	325	550	1050	1175	1550
	截波 Intercepled wave	357.5	605	1155	1292.5	1705
操作冲击耐受电压（kV） Switching impulse wet with stand voltage		–	–	850	950	1175
介质损耗因数 dielectric dissipation factor	最大值 Maximum	1.05Um/ √3 下不大于0.4% At 1.05Um,the lower limit should not be over 0.4%.				
	增值 Increment	1.05Um/ √3 到Um间变化不大于0.1% At 1.05Um,the cariation to Um should not be over 0.1%				
试验抽头绝缘水平（kV/min） test tap insulation level		3				
局部放电水平（pC） local discharge	Um	≤10				
	1.05Um/√3	≤5				
密封性试验 leakage test		0.65MPa/20min无泄漏 0.65MPa/20min without leakage				
热短时电流 thermal short time current		套管额定电流的25倍，持续时间2S 25 times of the bushing rated current,and lasts 2S.				
额定频率（Hz） rated frequency		50				
户外伞群 outdoor creepage extender		伞形为大小伞防污伞群，公称爬电距离符合GB/T26218的要求 There will be large and small creepage extenders.Nominal creepage distamce complies with the requirement of GB/T26218.				

悬臂耐受负荷 Cantilever load （N）

额定电压（kV）Rate voltage	额定电流（A） Rated Current			
	≤800	1000~1600	2000~2500	≥3150
72.5	2000N	2000N	3150N	4000N
126	3150N	3150N	4000N	4000N
252	4000N	4000N	5000N	5000N
363	4000N	4000N	5000N	5000N
550	4000N	4000N	5000N	5000N

套管的适用环境 Suitable environment for the bushings:

海拔高度：适用于海拔2000m及以下地区，当海拔超过2000m时，技术条件由双方另议；
环境温度：适用于最高温度不超过+50℃，最低温度不低于–50℃，当超过该温度范围时，技术条件由双方另议；
安装角度：可任意角度安装；
污秽等级：可用于Ⅲ级以上重污秽地区。

Elevation：it’s suitable to use at 2000m or lower. When the elevation is higher than 2000m, technical terms should be negotiated by both parties otherwise.
environment temperature：the maximum temperature should not be over 50℃ and the minimum temperature should not be lower than –50℃.When the temperature is beyond this range, technical terms should be negotiated by both parties otherwise.
Installation angle：any angle will do.
gradation for surface pollution： can be used heavily contaminated areas over Grade III.

订货须知 Order tips:

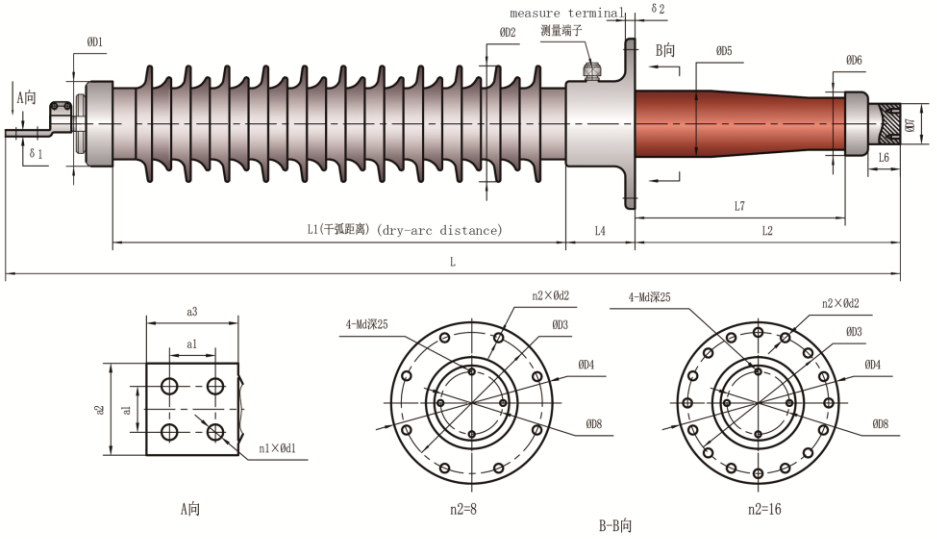
电气参数：额定电压、额定电流、额定频率、外绝缘爬电距离及绝缘净距、ＳＦ６端长度。
环境参数：环境温度、海拔高度、污秽等级。

注：套管法兰和接线端子的尺寸可以根据变压器制造商的要求进行特殊设计，也可对用户原有套管提供替代品。

Electrical parameters：rated voltage, rated current, rated frequency, outer insulation creepage distance and insulate clearance, length of SF 6 end.
Environment parameter：ttemperature, elevation, contamination level.
Notes：the size of bushing flange and wiring terminal can be specifically designed and substitute for existing bushing can also be supplied.

72.5–550kV玻璃钢电容式GIS套管

72.5–550kV FGRGW FRP Capacitive GIS Bushing

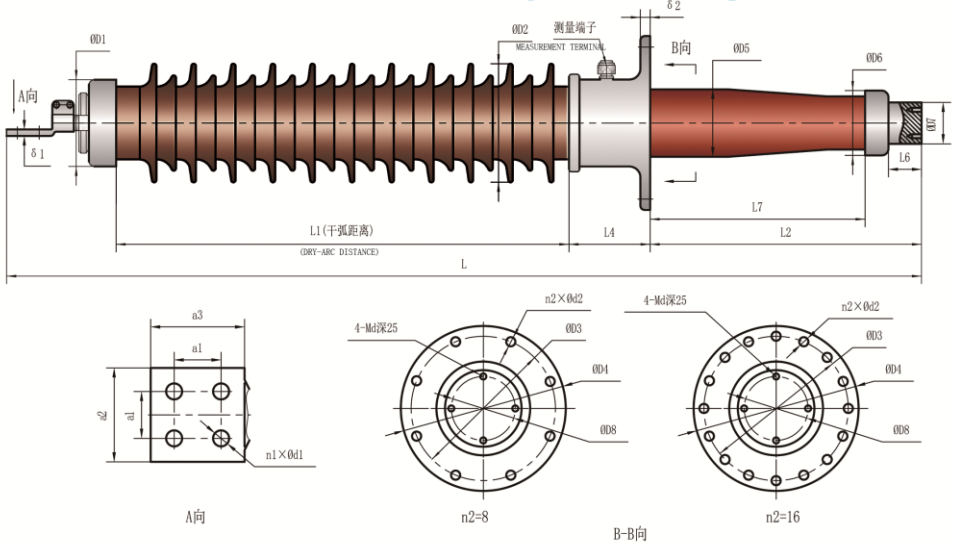


产品代号 Product Code	型号规格 Specification	总长 Total Lengh	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange					SF6筒芯体 SF6 End Core				SF6插接连接 SF6 Wiring Socket					接线座直径 Connection Seat Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔直×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes number Holes Diameter	厚度 Thickness	总长 Total Lengh	绝缘净距 Insulation Clearance	芯体直径 Core Diameter	均压球直径 Equalizing Ball Diameter	孔中心距 Hole Center Distance	螺孔直径 Screw Hole Diameter	接线座直径 Connection Seat Diameter	长度 length			
		L	a1	a2×a3	n1×Ød1	δ1	L1	D2	L4	D3	D4	n2×Ød2	δ2		L7	D5	D6	D8	Md	D7	L6	D1		
GT501	QXFGRGW-72.5/1250-4	1410	50	100×100	4×Φ18	14	700	290	120	280	330	8×Φ16	18	330	255	120	128	70	M12	99	30	140	48	
GT502	QXFGRGW-72.5/2000-4	1440	50	100×100	4×Φ18	16	700	290	120	280	330	8×Φ16	18	360	255	120	128	70	M12	99	30	140	50	
GT503	QXFGRGW-72.5/2500-4	1465	50	100×100	4×Φ18	16	700	290	120	280	330	8×Φ16	18	385	255	130	128	70	M12	99	30	140	60	
GT504	QXFGRGW-72.5/3150-4	1505	60	120×120	4×Φ18	20	700	290	120	280	330	8×Φ16	18	385	255	140	128	70	M12	99	30	140	65	
GT505	QXFGRGW-72.5/4000-4	1585	50	150×155	9×Φ18	20	700	290	120	280	330	8×Φ16	18	385	255	150	128	70	M12	99	30	140	70	
GT601	QXFGRGW-126/1250-4	2080	50	100×100	4×Φ18	14	1150	290	150	350	400	12×Φ14	20	520	445	150	128	70	M12	99	30	140	110	
GT602	QXFGRGW-126/2000-4	2110	50	100×100	4×Φ18	16	1150	290	150	350	400	12×Φ14	20	550	445	150	128	70	M12	99	30	140	115	
GT603	QXFGRGW-126/2500-4	2185	50	100×100	4×Φ18	16	1200	290	150	350	400	12×Φ14	20	575	445	160	128	70	M12	99	30	140	120	
GT604	QXFGRGW-126/3150-4	2325	60	120×120	4×Φ18	20	1300	290	150	350	400	12×Φ14	20	575	445	170	128	70	M12	99	30	140	125	
GT605	QXFGRGW-126/4000-4	2505	60	150×155	9×Φ18	20	1400	290	150	350	400	12×Φ14	20	575	445	180	128	70	M12	99	30	140	130	
GT901	QXFGRGW-252/1250-4	3575	50	100×100	4×Φ18	14	2210	490	260	450	500	12×Φ24	30	845	770	255	168	110	M12	139	30	162	400	
GT902	QXFGRGW-252/2000-4	3605	50	100×100	4×Φ18	16	2210	490	260	450	500	12×Φ24	30	875	770	255	168	110	M12	139	30	162	400	
GT903	QXFGRGW-252/2500-4	3630	50	100×100	4×Φ18	16	2210	490	260	450	500	12×Φ24	30	900	770	255	168	110	M12	139	30	162	430	
GT904	QXFGRGW-252/3150-4	3670	60	120×120	4×Φ18	20	2210	490	260	450	500	12×Φ24	30	900	770	255	168	110	M12	139	30	162	460	
GT905	QXFGRGW-252/4000-4	3750	50	150×155	9×Φ18	20	2210	490	260	450	500	12×Φ24	30	900	770	260	168	110	M12	139	30	162	490	
GT1001	QXFGRGW-363/1250-4	4478	50	100×100	4×Φ18	14	2948	565	270	600	650	16×Φ24	30	1000	880	255	208	110	M12	139	30	395	1100	
GT1002	QXFGRGW-363/2000-4	4468	50	100×100	4×Φ18	16	2948	565	260	600	650	16×Φ24	30	1000	880	255	208	110	M12	139	30	395	1110	
GT1003	QXFGRGW-363/2500-4	4468	50	100×100	4×Φ18	16	2948	565	260	600	650	16×Φ24	30	1000	880	255	208	110	M12	139	30	395	1130	
GT1004	QXFGRGW-363/3150-4	4508	60	120×120	4×Φ18	20	2948	565	260	600	650	16×Φ24	30	1000	880	255	208	110	M12	139	30	395	1140	
GT1005	QXFGRGW-363/4000-4	4588	50	150×155	9×Φ18	20	2948	565	260	600	650	16×Φ24	30	1000	880	260	208	110	M12	139	30	395	1150	
GT1101	QXFGRGW-550/1250-4	6080	50	100×100	4×Φ18	14	4260	630	260	750	800	16×Φ24	30	1300	1180	255	208	110	M12	139	30	485	2090	
GT1102	QXFGRGW-550/2000-4	6080	50	100×100	4×Φ18	16	4260	630	260	750	800	16×Φ24	30	1300	1180	255	208	110	M12	139	30	485	2090	
GT1103	QXFGRGW-550/2500-4	6080	50	100×100	4×Φ18	16	4260	630	260	750	800	16×Φ24	30	1300	1180	255	208	110	M12	139	30	485	2095	
GT1104	QXFGRGW-550/3150-4	6120	60	120×120	4×Φ18	20	4260	630	260	750	800	16×Φ24	30	1300	1180	255	208	110	M12	139	30	485	2098	
GT1105	QXFGRGW-550/4000-4	6200	50	150×155	9×Φ18	20	4260	630	260	750	800	16×Φ24	30	1300	1180	260	208	110	M12	139	30	485	2098	

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

72.5-550kV瓷外套玻璃钢电容式GIS套管

72.5-550kV QXGRGW FRP Capacitive GIS Bushing



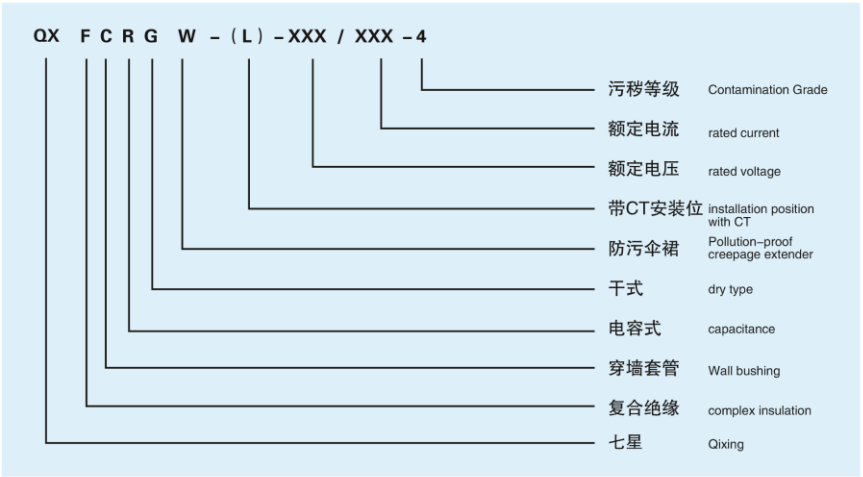
产品代号 Product Code	型号规格 Specification	总长 Total Lengh	空气接线端子 Air Wiring Terminal				户外伞群 Outdoor Creepage Extender		安装法兰 Mounting Flange						SF6腔芯体 SF6 core				SF6接线座 SF6 Wiring Socket				接线座直径 Connection Seat Diameter	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes Number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外径 Hole Diameter	孔数×孔径 Holes Number Holes Diameter	厚度 Thickness		总长 Total Lengh	绝缘净距 Insulation Clearance	芯体直径 Core Diameter	均压球直径 Equalizing Ball Diameter	孔中心距 Hole Center Distance	螺孔直径 Screw Hole Diameter	接线座直径 Connection Seat Diameter	长度 length		
		L	a1	a2×a3	n1×Ød1	δ1	L1	D2	L4	D3	D4	n2×Ød2	δ2		L2	L7	D5	D6	D8	Md	D7	L6	D1	
CGT501	QXGRGW-72.5/1250-4	1440	50	100×100	4×Φ18	14	700	294	150	280	330	8×Φ16	18		330	255	120	140	70	M12	99	30	140	80
CGT502	QXGRGW-72.5/2000-4	1470	50	100×100	4×Φ18	16	700	294	150	280	330	8×Φ16	18		360	255	120	140	70	M12	119	30	140	90
CGT503	QXGRGW-72.5/2500-4	1495	50	100×100	4×Φ18	16	700	294	150	280	330	8×Φ16	18		385	255	130	140	70	M12	129	30	140	100
CGT504	QXGRGW-72.5/3150-4	1535	60	120×120	4×Φ18	20	700	325	150	280	330	8×Φ16	18		385	255	135	139	70	M12	139	30	140	90
CGT505	QXGRGW-72.5/4000-4	1615	50	150×155	9×Φ18	20	700	325	150	280	330	8×Φ16	18		385	255	140	159	70	M12	159	30	140	100
CGT601	QXGRGW-126/1250-4	2100	50	100×100	4×Φ18	14	1140	355	180	350	400	12×Φ14	20		520	445	150	140	70	M12	99	30	140	140
CGT602	QXGRGW-126/2000-4	2130	50	100×100	4×Φ18	16	1140	355	180	350	400	12×Φ14	20		550	445	150	140	70	M12	119	30	140	150
CGT603	QXGRGW-126/2500-4	2155	50	100×100	4×Φ18	16	1140	355	180	350	400	12×Φ14	20		575	445	160	140	70	M12	129	30	140	160
CGT604	QXGRGW-126/3150-4	2195	60	120×120	4×Φ18	20	1140	365	180	350	400	12×Φ14	20		575	445	170	139	70	M12	139	30	140	150
CGT605	QXGRGW-126/4000-4	2275	60	150×155	9×Φ18	20	1140	365	180	350	400	12×Φ14	20		575	445	180	159	70	M12	159	30	140	160
CGT901	QXGRGW-252/1250-4	3650	50	100×100	4×Φ18	14	2240	450	305	450	500	12×Φ24	30		845	770	260	159	110	M12	139	30	168	370
CGT902	QXGRGW-252/2000-4	3680	50	100×100	4×Φ18	16	2240	450	305	450	500	12×Φ24	30		875	770	260	159	110	M12	139	30	168	400
CGT903	QXGRGW-252/2500-4	3705	50	100×100	4×Φ18	16	2240	450	305	450	500	12×Φ24	30		900	770	260	159	110	M12	139	30	168	430
CGT904	QXGRGW-252/3150-4	3745	60	120×120	4×Φ18	20	2240	450	305	450	500	12×Φ24	30		900	770	260	159	110	M12	139	30	168	460
CGT905	QXGRGW-252/4000-4	3825	50	150×155	9×Φ18	20	2240	450	305	450	500	12×Φ24	30		900	770	270	159	110	M12	159	30	168	490
CGT1001	QXGRGW-363/1250-4	5305	50	100×100	4×Φ18	14	3740	587	305	600	650	16×Φ24	35		1000	880	360	159	110	M12	139	30	208	1100
CGT1002	QXGRGW-363/2000-4	5480	50	100×100	4×Φ18	16	3740	587	480	600	650	16×Φ24	35		1000	880	360	159	110	M12	139	30	208	1110
CGT1003	QXGRGW-363/2500-4	5480	50	100×100	4×Φ18	16	3740	587	480	600	650	16×Φ24	35		1000	880	360	159	110	M12	139	30	208	1130
CGT1004	QXGRGW-363/3150-4	5520	60	120×120	4×Φ18	20	3740	587	480	600	650	16×Φ24	35		1000	880	360	159	110	M12	139	30	208	1140
CGT1005	QXGRGW-363/4000-4	5600	50	150×155	9×Φ18	20	3740	587	480	600	650	16×Φ24	35		1000	880	360	159	110	M12	159	30	208	1150
CGT1105	QXGRGW-550/4000-4	6930	50	150×155	9×Φ18	20	4685	685	565	750	800	16×Φ24	35		1300	1180	450	159	110	M12	159	30	208	2075

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

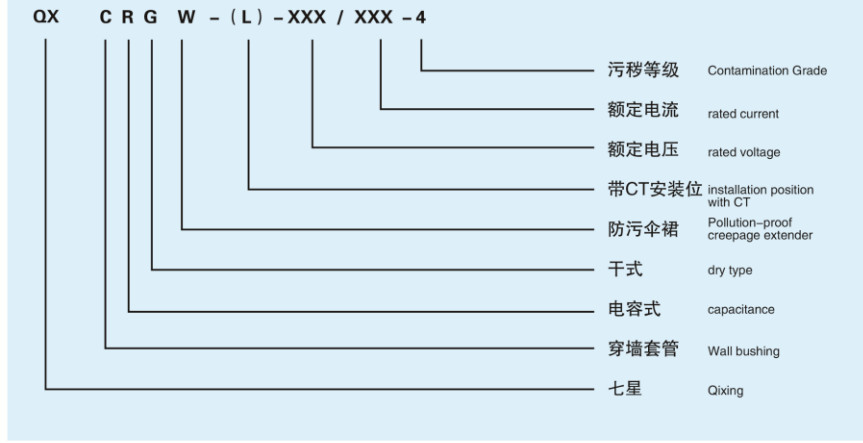
玻璃钢电容式穿墙套管

FRP Capacitive Wall Bushing

玻璃钢电容式穿墙套管型号说明 Description:



瓷外套玻璃钢电容式穿墙套管型号说明 Description:



产品主要技术性能指标 Main technical index

系统标称电压（kV） Nominal voltage		10	20	35	66	110	220	330
额定电压（设备最高电压）（kV） rated voltage (the highest voltage of the equipment)		12	24	40.5	72.5	126	252	363
工频耐受电压（kV/min） frequency with stand voltage	干 Dry	28	50	95	140	230	460	570
	湿 Wet	28	50	80	140	230	460	535
雷电冲击耐受电压（kV） Thunder impulse with stand voltage	全波 Whole wave	75	125	200	325	550	950	1175
	截波 Intercepled wave	82.5	137.5	220	357.5	605	1045	1292.5
操作冲击耐受电压（kV） Switching impulse wet with stand voltage		–	–	–	–	–	850	950
介质损耗因数 dielectric dissipation factor	最大值 Maximum	1.05Um/ √3 下不大于0.4% At 1.05Um,the lower limit should not be over 0.4%.						
	增值 Increment	1.05Um/ √3 到Um间变化不大于0.1% At 1.05Um,the cariation to Um should not be over 0.1%						
试验抽头绝缘水平（kV/min） test tap insulation level		3						
局部放电水平（pC） local discharge	Um	≤10						
	1.05Um/√3	≤5						
密封性试验 leakage test		0.2MPa/20min无泄漏 0.2MPa/20min without leakage						
热短时电流 thermal short time current		套管额定电流的25倍，最大为100kA，持续时间2S 25 times of the bushing rated current,the maximum is 100kA,and lasts 2S.						
额定频率（Hz） rated frequency		50						
户外伞群 outdoor creepage extender		伞形为大小伞防污伞群，公称爬电距离符合GB/T26218的要求 There will be large and small creepage extenders.Nominal creepage distamce complies with the requirement of GB/T26218.						

穿墙套管 Wall Bushing

悬臂耐受负荷 cantilever load（N）

额定电压（kV） Rate voltage	额定电流（A） Rated Current			
	≤800	1000~1600	2000~2500	≥3150
≤52	1600N	1600N	2500N	3150N
72.5	2000N	2000N	3150N	4000N
123~145	3150N	3150N	4000N	4000N
170~363	4000N	4000N	5000N	5000N

套管的适用环境

海拔高度：适用于海拔2000m及以下地区，当海拔超过2000m时，技术条件由双方另议；
环境温度：适用于最高温度不超过+50℃，最低温度不低于-50℃，当超过该温度范围时，技术条件由双方另议；
安装角度：可任意角度安装；
污秽等级：可用于Ⅲ级以上重污秽地区。

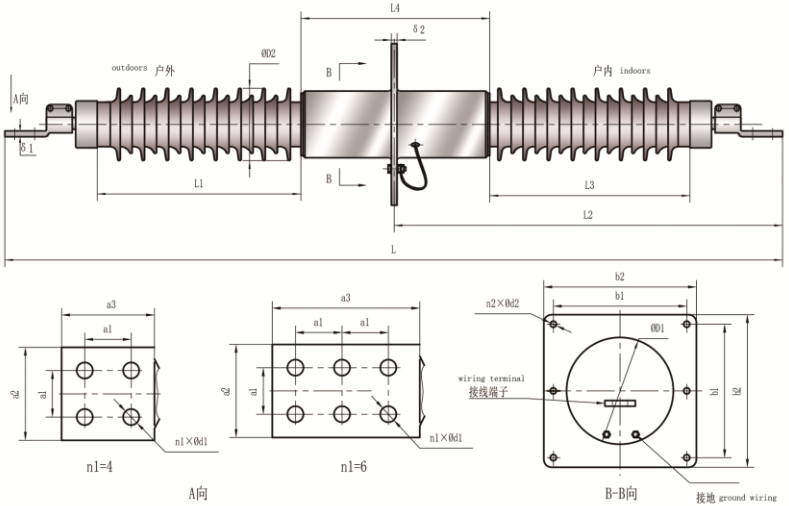
Elevation： it’s suitable to use at 2000m or lower. When the elevation is higher than 2000m, technical terms should be negotiated by both parties otherwise.
environment temperature： the maximum temperature should not be over 50℃ and the minimum temperature should not be lower than –50℃.When the temperature is beyond this range, technical terms should be negotiated by both parties otherwise.
Installation angle： any angle will do.
gradation for surface pollution：can be used in heavily contaminated areas over Grade III.

订货须知 Order tips:

电气参数：额定电压、额定电流、额定频率、户内及户外的爬电距离及绝缘净距。
环境参数：环环境温度、海拔高度、污秽等级。
安装方式：如需附设贯穿式电流互感器，须明确电流互感器为分体还是一体式，并提出电流互感器的相关参数。
注：套管法兰和接线端子的尺寸可以根据变压器制造商的要求进行特殊设计，也可对用户原有套管提供替代品。

Electrical parameters：rated voltage, rated current, rated frequency, indoor and outdoor insulation creepage distance and insulation clearance, length of SF 6 end.
Environment parameter： temperature, elevation, contaminationlevel.
Mounting method：If through current transformer is needed, it has to be clarified whether the transformer is split type or integrated type and relevant parameters should be provided.
Notes: the size of bushing flange and wiring terminal can be specifically designed and substitute for existing bushing can also be supplied.

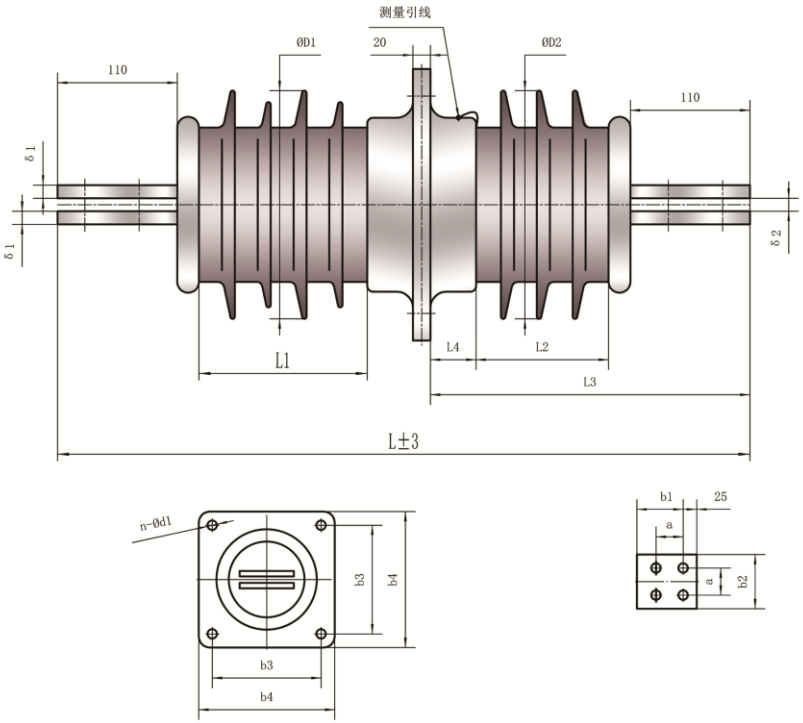
玻璃钢电容式穿墙套管
QXFCRGW（L）FRP Capacitive Wall Bushing



产品代号 Product Code	型号规格 Specification	总长 Total Lengh	空气接线端子 Air Wiring Terminal				户内部分 Indoor Part			安装法兰 Mounting Flange					户内部分 Indoor Part		墙体开孔尺寸 Wall Opening Size	重量 Weight
			孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	绝缘净距 Insulation Clearance	伞形 Mcreepage	最大伞外径 Max Creepage Extender Out Diamter	长度 length	孔中心距 Hole Center Distance	外形 outer Diameter	孔数×孔径 Holes number Holes Diameter	厚度 Thickness	总长 Total Lengh	绝缘净距 Insulation Clearance		
		L	a1	a2×a3	n1×Φd1	δ1	L1		D2	L4	D3	b2×b2	n2×Φd2	δ2	L2	L3	D1	
CT101	QXFCRGW-12/1250-4	710	40	80×80	4×Φ14	14	150	大小伞	220	70	200	240×240	4×Φ15	12	340	150	220	15
CT102	QXFCRGW-12/1600-4	720	50	100×100	4×Φ18	14	150	大小伞	220	70	200	240×240	4×Φ15	12	370	150	220	15
CT103	QXFCRGW-12/2000-4	720	50	100×100	4×Φ18	16	150	大小伞	220	70	200	240×240	4×Φ15	12	370	150	220	15
CT104	QXFCRGW-12/2500-4	790	60	120×120	4×Φ18	16	150	大小伞	220	70	200	240×240	4×Φ15	14	405	150	220	20
CT105	QXFCRGW-12/3150-4	790	60	120×120	4×Φ18	20	150	大小伞	220	70	200	240×240	4×Φ15	14	405	150	220	35
CT106	QXFCRGW-12/4000-4	910	50	150×150	9×Φ18	20	150	大小伞	220	70	200	240×240	4×Φ15	14	465	150	220	65
CT201	QXFCRGW-24/1250-4	1000	40	80×80	4×Φ14	14	280	大小伞	220	100	200	240×240	4×Φ15	14	560	280	220	20
CT202	QXFCRGW-24/1600-4	1060	50	100×100	4×Φ18	14	280	大小伞	220	100	200	240×240	4×Φ15	14	590	280	220	25
CT203	QXFCRGW-24/2000-4	1060	50	100×100	4×Φ18	16	280	大小伞	220	100	200	240×240	4×Φ15	14	660	280	220	20
CT204	QXFCRGW-24/2500-4	1130	60	120×120	4×Φ18	16	280	大小伞	220	100	200	240×240	4×Φ15	14	665	280	220	35
CT205	QXFCRGW-24/3150-4	1130	60	120×120	4×Φ18	20	280	大小伞	220	100	200	240×240	4×Φ15	14	665	280	220	45
CT206	QXFCRGW-24/4000-4	1250	50	150×150	9×Φ18	20	280	大小伞	220	100	200	240×240	4×Φ15	14	695	280	220	70
CT301	QXFCRGW-40.5/1250-4	1200	40	80×80	4×Φ14	14	400	大小伞	220	100	200	240×240	4×Φ15	14	755	360	220	30
CT302	QXFCRGW-40.5/1600-4	1260	50	100×100	4×Φ18	14	400	大小伞	220	100	200	240×240	4×Φ15	14	770	360	220	30
CT303	QXFCRGW-40.5/2000-4	1260	50	100×100	4×Φ18	16	400	大小伞	220	100	200	240×240	4×Φ15	14	770	360	220	40
CT304	QXFCRGW-40.5/2500-4	1330	60	120×120	4×Φ18	16	400	大小伞	220	100	200	240×240	4×Φ15	14	795	360	220	40
CT305	QXFCRGW-40.5/3150-4	1330	60	120×120	4×Φ18	20	400	大小伞	220	100	200	240×240	4×Φ15	14	795	360	220	60
CT306	QXFCRGW-40.5/4000-4	1450	50	150×150	9×Φ18	20	400	大小伞	220	100	200	240×240	4×Φ15	14	825	360	220	85
CT501	QXFCRGW-72.5/1250-4	1990	40	80×80	4×Φ14	14	750	大小伞	290	200	350	400×400	6×Φ17	18	1060	700	300	65
CT502	QXFCRGW-72.5/1600-4	2050	50	100×100	4×Φ18	16	750	大小伞	290	200	350	400×400	6×Φ17	18	1090	700	300	70
CT503	QXFCRGW-72.5/2000-4	2050	50	100×100	4×Φ18	16	750	大小伞	290	200	350	400×400	6×Φ17	18	1115	700	300	80
CT504	QXFCRGW-72.5/2500-4	2120	60	120×120	4×Φ18	16	750	大小伞	290	200	350	400×400	6×Φ17	18	1140	700	300	90
CT601	QXFCRGW-126/1250-4	2840	40	80×80	4×Φ14	14	1150	大小伞	290	350	350	400×400	6×Φ17	20	1425	1000	300	100
CT602	QXFCRGW-126/1600-4	2900	50	100×100	4×Φ18	16	1150	大小伞	290	350	350	400×400	6×Φ17	20	1455	1000	300	110
CT603	QXFCRGW-126/2000-4	2900	50	100×100	4×Φ18	16	1150	大小伞	290	350	350	400×400	6×Φ17	20	1455	1000	300	130
CT604	QXFCRGW-126/2500-4	2970	60	120×120	4×Φ18	16	1150	大小伞	290	350	350	400×400	6×Φ17	20	1480	1000	300	150
CT901	QXFCRGW-252/1250-4	5020	50	100×100	4×Φ18	14	2210	大小伞	490	400	640	700×700	8×Φ24	30	2700	2070	540	450
CT902	QXFCRGW-252/1600-4	5080	50	100×100	4×Φ18	16	2210	大小伞	490	400	640	700×700	8×Φ24	30	2700	2070	540	500
CT903	QXFCRGW-252/2000-4	5080	50	100×100	4×Φ18	16	2210	大小伞	490	400	640	700×700	8×Φ24	30	2700	2070	540	520
CT904	QXFCRGW-252/2500-4	5150	60	120×120	4×Φ18	16	2210	大小伞	490	400	640	700×700	8×Φ24	30	2725	2070	540	540
CT1001	QXFCRGW-363/1250-4	6883	60	120×120	4×Φ18	16	2984	大小伞	595	400	660	700×700	8×Φ24	30	3255	2600	650	850
CT1002	QXFCRGW-363/2500-4	6883	60	120×120	4×Φ18	16	2984	大小伞	595	400	660	700×700	8×Φ24	30	3255	2600	650	900

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.

铜排型玻璃钢穿墙套管
QXFCRGW（L）FRP Capacitive Wall Bushing



产品代号 Product Code	型号规格 Specification	总长 Total Lengh	户外端 Outdoor Part		户内部分 Indoor Part			空气接线端子 Air Wiring Terminal					安装法兰 Mounting Flange				墙体开孔尺寸 Wall Opening Size	产品代号 Production Code	重量 Weight
			绝缘净距 Insulation Clearance	最大伞外径 Max Creepage Extender Out Diamter	绝缘净距 Insulation Clearance	户内总长 Indoor Length	接地长度 Earth Lenth	最大伞外径 Max Creepage Extender Out Diamter	孔距 Hole Distance	板面尺寸 Board Size	孔数×孔径 Holes number Holes Diameter	板厚 Thickness	孔中心距 Hole Center Distance	外形 outer Diameter	孔数×孔径 Holes number Holes Diameter	厚度 Thickness			
		L	L1	D1	L2	L3	L4	D2	a1	a2×a3	n1×Φd1	δ1	D3	b2×b2	n2×Φd2	δ2	D1		
MCT101	QXFCRGW-12/4000-4	690	140	290	140	320	50	220	50	100×110	4×Φ18	10	200	240×240	4×Φ18	16	220	FC0140	30
MCT102	QXFCRGW-12/5000-4	690	140	290	140	320	50	220	50	100×110	4×Φ18	12	200	240×240	4×Φ18	16	220	FC0150	33
MCT103	QXFCRGW-24/4000-4	990	290	290	290	470	50	220	50	100×110	4×Φ18	10	200	240×240	4×Φ18	20	220	FC0240	43
MCT104	QXFCRGW-24/5000-4	990	290	290	290	470	50	220	50	100×110	4×Φ18	12	200	240×240	4×Φ18	20	220	FC0250	48
MCT105	QXFCRGW-40.5/4000-4	1190	390	290	390	570	50	220	50	100×110	4×Φ18	10	230	280×280	4×Φ18	20	250	FC0440	66
MCT106	QXFCRGW-40.5/5000-4	1190	390	290	390	570	50	220	50	100×110	4×Φ18	12	230	280×280	4×Φ18	20	250	FC0450	73

注：表中产品外形尺寸为推荐尺寸，所有尺寸都可以根据用户要求设计。
Note: the dimension of the product in the table is recommended size, all sizes can be designed according to user's requirements.