


FISPTÉ®

菲斯普特

德国暖通管道定制专家
Germany HVAC Piping Custom Expert

 央视展播品牌



德国品质 全球共享



我们来自德国
为全球客户提供舒适暖通服务
We Are From Germany
Providing Global Customers With Comfortable HVAC Services

FISPTE



菲斯普特 —— 德国暖通管道定制专家
Fispte – German Customizing Expert of HVAC Pipes



德国 - 莱茵河畔
Germany-The Rhine

About FISPTE

Fispte (Hangzhou) Pipe Technology Co., Ltd. is a pipe production base established by German Fispte GmbH in China, and is responsible for the brand service and production support of German Fispte GmbH in Chinese region. German Fispte GmbH has been committed itself to research and production of HVAC pipe system, and provides service to the world as German Customizing Expert of HVAC Pipe System. Fispte (China), by means of exquisite pipe manufacture technology and optimized quality control system from Germany, provides Chinese market with heating pipes imported originally from Germany, HVAC pipe system of German quality as well as all-around service support by applying innovative international service concept and humanized customization solutions. Fispte products have been sold well in more than 200 distribution networks of large and middle cities in China, and its product sales and service cover more than 20 countries. German Fispte GmbH can bring you more than warmth!

关于菲斯普特

德国 FISPTE GmbH 成立于 1976 年，总部位于美丽的莱茵河畔 --- 德国杜塞尔多夫，是一家长期致力于高端暖通管路系统研发与生产的企业，以德国暖通管路系统定制专家为己任服务于全球，距今已有四十多年的历史。杜塞尔多夫是德国西北部靠近荷兰的重要工业城、德国工业的大动脉，也是中国通讯产品巨头华为、中兴公司在西欧的总部所在地。

德国 FISPTE GmbH 于 2009 年进军中国市场并大力发展经销网点，于 2010 年在兵家必争之地的汉文化发源地江苏徐州成立了中国运营中心。经过多年的发展 FISPTE GmbH 在中国已有二百多家经销网点，为了更好的适应中国市场的发展与服务，于 2013 年 3 月在杭州萧山经济开发区成立了菲斯普特（杭州）管道科技有限公司，主要负责德国 FISPTE GmbH 在中国区域的品牌服务与生产支持。



About FISPTE

, put pipeline technology (hangzhou) co., LTD., with the German pipe technology and optimize the quality control system, the innovation of the internationalization of service concept and humanistic custom solutions, for the Chinese market to provide FISPTE Germany imported PE - Xc EVOH five layer resistance oxygen pipe, PE - five layer resistance RT EVOH super soft oxygen pipe and hvac piping systems with German quality products: PE - Xb (PE - RT) seamless butt welding aluminum-plastic oxygen pressure pipe, PE - RT EVOH resistance floor heating pipe, aluminum-plastic pp-r steady-state, the nano antibacterial pp-r hot and cold water pipe, SUS 304 stainless steel bellows products such as all-round services to support, and to undertake OEM custom processing business worldwide.

Currently FISPTE, put the product sales and service has covered more than 20 countries and regions in the world, major cities in China has more than 500 dealerships. , after years of innovation and development, and put (China) with Evergrande property, the green groups, kaiyuan real estate and other well-known real estate development company for cooperation, and in 2014, after strict assessment of A.O Smith nanjing headquarters was identified as qualified suppliers, provides the high quality for the A.O Smith's sales agents of heating pipe series products, has won the praise of many partners and good reputation.

FISPTE, poulter, always adhere to the "create value for customers, for enterprises to win users" marketing idea, adhere to the "strict standard specialization, fine, cengcengbagan, quality first" quality concept, insist on "honesty, innovation, enterprising, the path of win-win Thanksgiving, return society" of the enterprise purpose, wholeheartedly welcome your cooperation and join us. We are always with a Thanksgiving heart to provide you with the best quality products and services, FISPTE, put can bring you, is not only a warm.

关于菲斯普特

菲斯普特（杭州）管道科技有限公司凭借德国精湛的制管技术与优化的质量管控体系，运用创新的国际化服务理念与人性化的定制解决方案，为中国市场提供 FISPTE 德国原装进口 PE-Xc EVOH 五层阻氧管、PE-RT EVOH 超柔五层阻氧管及具有德国品质的暖通管路系统产品：PE-Xb（PE-RT）无缝对接焊铝塑压力管、PE-RT EVOH 阻氧地暖管、铝塑 PP-R 稳态管、纳米抗菌 PP-R 冷热水管、SUS 304 不锈钢波纹管等产品的全方位服务于支持，并承接全球 OEM 定制加工业务。

目前 FISPTE 菲斯普特产品销售与服务已覆盖全球 20 多个国家和地区，在中国各大城市已拥有 500 多家经销网点。经过多年的创新与发展，菲斯普特（中国）已与恒大地产、绿地集团、开元房产、港华燃气等知名企业进行了配套合作，并于 2014 年初经 A.O. 史密斯南京总部的严格考评后被认定为合格供应商，为旗下代理商提供高品质的采暖管路系列产品，赢得了众多合作伙伴的一致好评及良好的口碑。

FISPTE 菲斯普特始终坚持“为用户创造价值，为企业赢得用户”的营销理念，坚持“严控标准、做专做精、层层把关、品质第一”的质量理念，坚持“诚信正道、务实创新、共赢感恩、回报社会”的企业宗旨，竭诚欢迎您的合作与加盟。我们始终怀着感恩之心为您提供最优质的产品与服务，FISPTE 菲斯普特能带给您的，不仅仅是温暖。



德国菲斯普特管道（中国）生产基地
German Fispte GmbH Production base in China

德国 FISPTE GmbH 总部





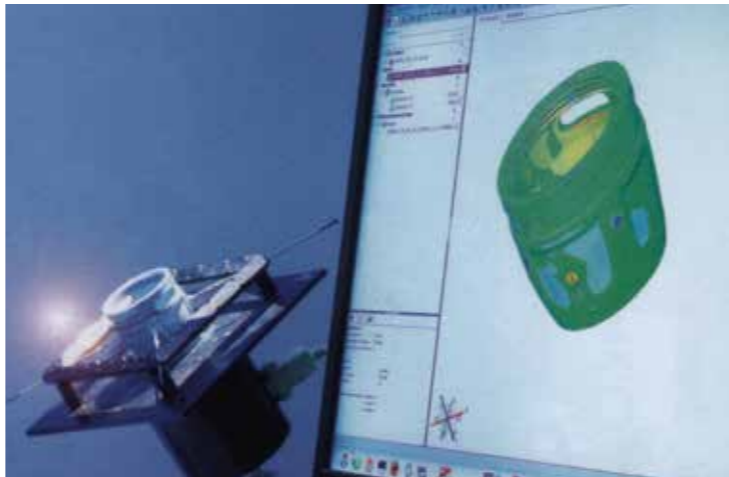
German innovative technology to bring global customers with distinctive warmth

Since establishment of the company, products of German Fispte GmbH have been sold in Europe, Asia, Latin America, etc.; each Fispte member has been devoted himself to provision of more extensive high-quality products and more advanced technical service for global heating pipe system. German Fispte GmbH strives to touch each customer with all-around services, and conducts whole-course quality tracking and one-to-one intimate service for each pipe and product sold out, thus making the public praise as the best marketing way for German Fispte GmbH.

德国革新工艺 为全球客户带来不一样的温暖

公司成立至今，德国 Fispte GmbH 产品销售已遍布欧亚拉美等各大洲，每个菲斯普特人都致力于全球的采暖管道系统提供更广泛的高品质产品与更先进的技术服务而不懈努力。
德国 Fispte GmbH 力争用全方位的服务打动每一位客户，对于销售出去的每一米管子每一套产品均采取全程质量跟踪一对一贴心服务，让客户的口碑成为德国 Fispte GmbH 最好的宣传途径。

专业的生产、服务团队
Professional production and service team



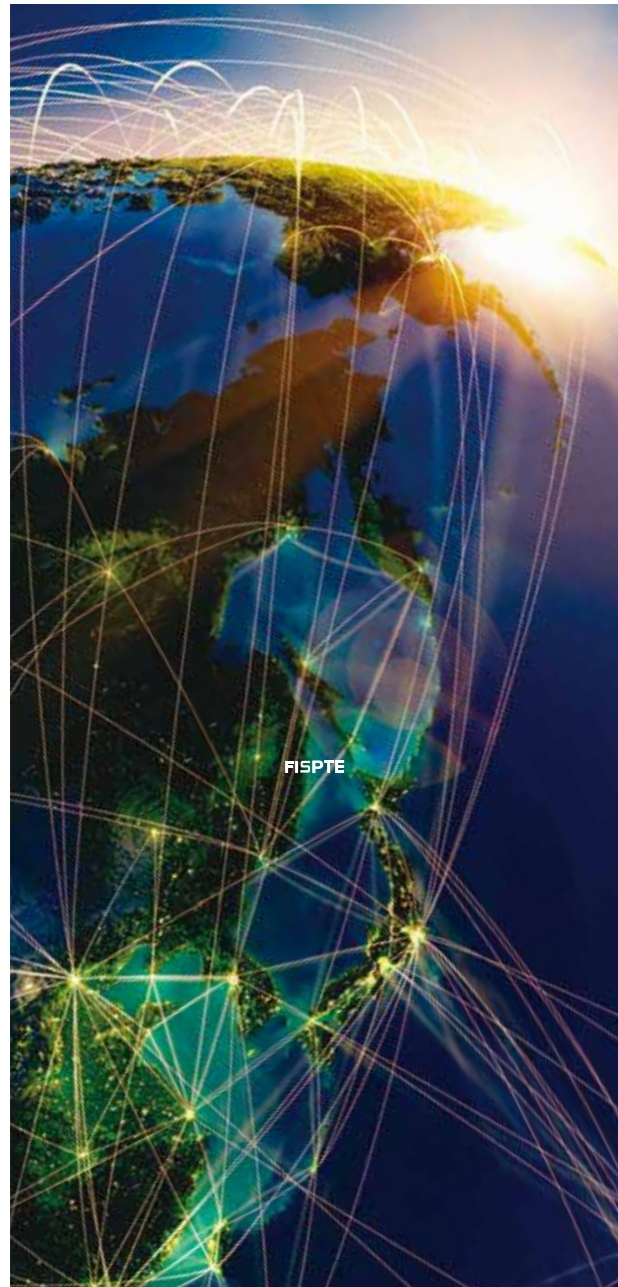
专业的研发、检测团队
Professional R & D, testing team

**德国品质保证
为客户严格质控**

德国 Fispte GmbH 严格执行欧洲标准, 层层把控, 严苛要求自身, 绝不让一件失败品流入市场。我们坚持将产品做到极致, 坚持将采暖作为自己的毕生事业, 用心为全球客户带来更便捷的采暖新方式。

**German quality assurance to
strictly control quality**

German Fispte GmbH never allows each failure to appear on the market by strictly executing EN, checking each link and containing themselves strictly. We insist on making the best products and taking heating as our lifework, thus bringing a new convenient heating way for global customers.



Sino-Germany Cooperation

Fispte (Hangzhou) Pipe Technology Co., Ltd. is a pipe production base established by German Fispte GmbH in China, and is responsible for the brand service and production support of German Fispte GmbH in Chinese region.

In order to expand production capacity and satisfy various demands of customers in different levels, Fispte GmbH has established strategic cooperation relationship with many well-known enterprises at home and abroad successively, striving to satisfy the demand supply of customers at different levels while ensuring product quality.

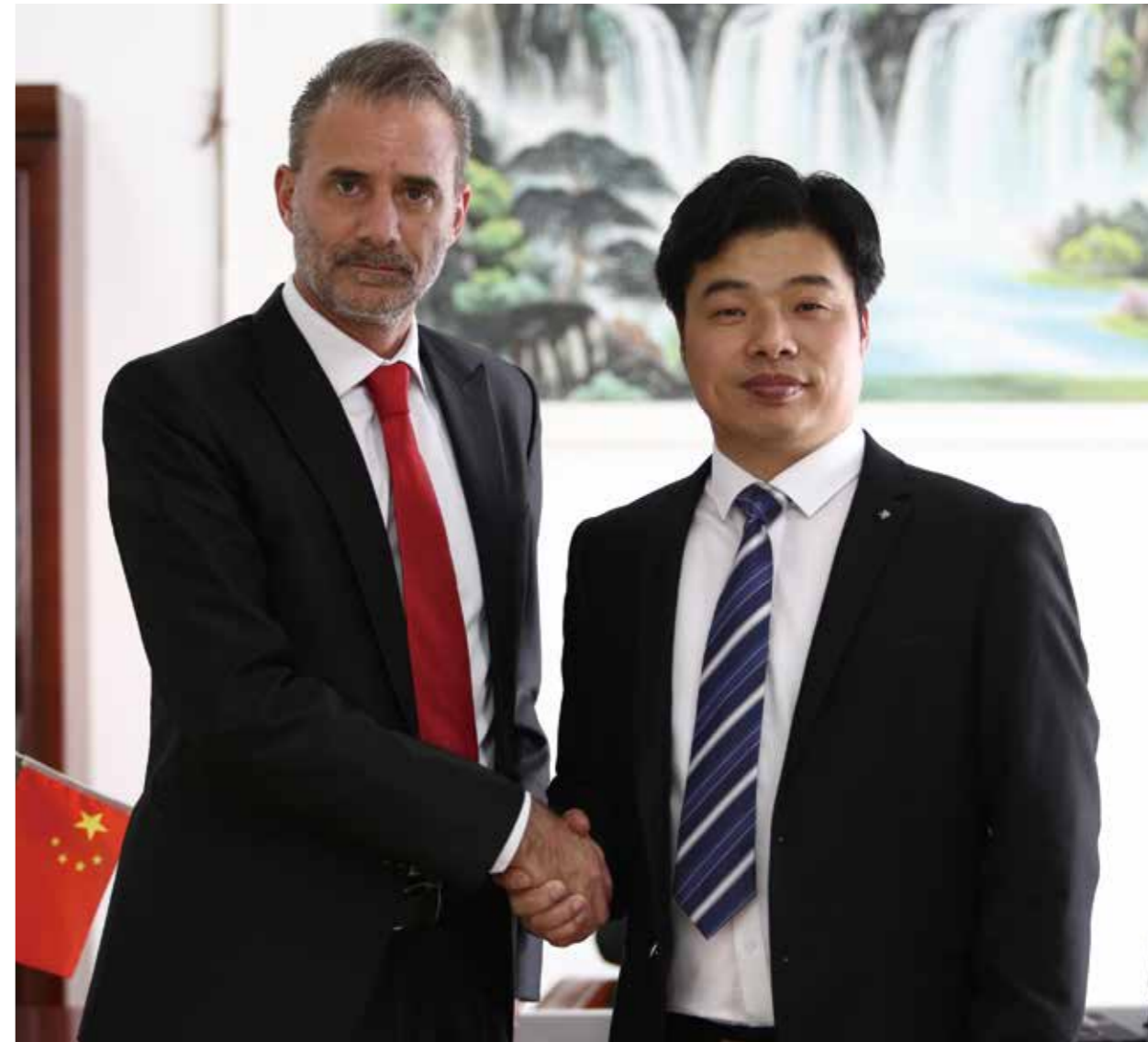
Fispte GmbH keeps trying to perfect each detail of products and service diligently through his own effort, just for you enjoying all-around warmth!

中德合作 国际视野

菲斯普特（杭州）管道科技有限公司系德国 Fispte GmbH 在中国设立的管道生产基地，负责德 Fispte GmbH 在中国区域的品牌服务与生产支持。

Fispte GmbH 为满足不同层次客户的各类需求，先后与德国 HEWING GmbH、hpg GmbH 等国内外多家知名企业建立了战略合作关系，力求在确保产品质量的基础上，更能满足广大客户不同等级的需求供应量。

Fispte GmbH 正在不断尝试通过自身努力，用心做好产品与服务每个细节，带给您全方位的温暖与享受！



中国 德国 (中德合作)



German technology to bring new warmth

German Fispte GmbH from “German Professional Manufacture” keeps ahead of the manufacturing technique concerning its German Quality just like other German products. As a high-end global HVAC customizing expert, German Fispte devotes itself to offering high-quality HVAC pipe system products and service for global customers and strives for zero-defect delivery of each HVAC product. German Fispte has been practicing the manufacturing standard of “high quality, high standard and high starting point”, in order to influence and change people’s life style and provide more powerful quality assurance for comfortable life.

以德国科技 带来全新的温暖

德国 FISPTE GmbH 来自“德系精工制造”，其德国品质与其他德国产品一样领先于国内同类产品的生产企业。德国 FISPTE 作为全球高端暖通定制专家，致力于为全球客户提供优质暖通管路系统产品的定制服务，力求每一件暖通系列产品做到零瑕疵交付。德国 FISPTE 践行“高品质、高标准、高起点”的制造标准，从而影响和改变人们的生活习惯，努力为全人类的舒适生活提供更有力的品质保证。

（德国原装进口系列）

PE-Xc (5 Layer) EVOH Pipe Series

PE-Xc (五层) 阻氧采暖管系列



PE-Xc

PE-Xc 是一种高分子材料，学名辐射交联聚乙烯管，是采用高密度聚乙烯（HDPE）为生产原料，加上其他一些辅助原料（如抗氧化剂等）。在塑料挤出机里挤出管材（未交联），然后将挤出的未交联管在辐射装置上（电子加速器或钴-60 辐照站），利用高能射线（电子束或 γ 射线）进行辐射交联，采用此方法生产的聚乙烯管称为辐射交联聚乙烯管（PE-Xc 管）。

聚乙烯的交联有化学和物理方法，化学方法就是我们常说的过氧化物交联、硅烷交联或偶氮交联的方法。而物理交联就是无需加化学交联剂，利用高能射线，将聚乙烯分子激发产生自由基、自由基结合产生分子间的交联键、形成聚乙烯分子的交联结构。辐射交联的基本原理是：高能粒子将聚乙烯分子激发产生高分子自由基，自由基相互结合产生交联键，形成聚乙烯分子的三维网状结构。

PE-Xc

PE-Xc (scientific name: radiant crosslinked polyethylene pipe) is a pipe fitting of high polymer material, which is made of HDPE and other auxiliary raw materials (such as antioxidant). Pipe (non-crosslinked) is extruded out of plastic extruder, then the non-crosslinked pipe extruded is placed on the radiation appliance (electron accelerator or Co-60 irradiation station) for radiation crosslinking with high-energy ray (electron beam or γ ray irradiation); PE pipe produced via such method is called radiant crosslinked polyethylene pipe (PE-Xc pipe).

PE crosslinking includes chemical and physical methods; chemical method refers to PE-Xa, PE-Xb or PE-Xd, and physical crosslinking means that without adding chemical crosslinking agent, PE molecule under high-energy ray generates free radical, and then intermolecular cross bond is generated via combination of free radical to form the crosslinked structure of PE molecule. Basic principle of radiation crosslinking: PE molecule under high-energy particle generates macromolecule free radical, and then cross bond is generated via combination of free radical to form 3D network structure of PE molecule.



Product Application

This product is applicable to pipe connection in floor heating and radiator connection that has oxygen barrier requirement for system environment, and is mainly to prevent oxygen molecule from entering hot water system, which may corrode system components and reduce the service life of the system.

产品应用

适用于地暖及散热器连接中对系统环境有阻氧要求的管路连接，主要是防止氧分子进入热水系统中对系统的构件造成腐蚀，延缓系统的使用寿命。

（德国原装进口系列）

PE-Xc (5 Layer) EVOH Pipe Series

PE-Xc (五层) 阻氧采暖管系列

产品优势

德国 FISPTe 菲斯普特 PE-Xc (五层) 阻氧采暖管是一种不需要化学交联剂的辐射交联聚乙烯管道，不仅具有其他 PE-X 管所具有的耐热、耐寒、耐化学药品性能，易弯曲、施工方便，使用寿命长（可达 50 年）等性能优点。还具有交联度均匀、化学纯净度高、卫生性能好，特别适应于纯净水等高纯净要求的流体输送；

PE-Xc 管是采用后交联工艺，挤出是采用通用挤出设备，管的外观质量更易控制；

辐射交联过程是固态交联，也可以说是后交联工艺。辐射交联所要达到的交联度是由辐射剂量来控制。交联的均匀性是由辐射的均匀性来决定的，而辐射的均匀性是由计算机来控制，因此它的交联均匀性非常好；

中间为 EVOH 阻氧层，具有 100% 的阻氧性能，有效的防护采暖系统氧腐蚀，可广泛应用于壁挂炉分户采暖系统中的地暖铺设和高温散热器联接管道。

由于辐射交联需要建造较大规模的辐射设施，辐射交联生产线的初期投资比较大，产品的生产成本较高，因此菲斯普特公司采用德国原装进口。


Product Advantages

No chemical crosslinking agent is needed in radiation crosslinking, so the product has a high chemical purity and good hygiene property;

Post-crosslinking process and common extrusion equipment are adopted for PE-Xc pipe; it is easier to control the quality of pipes' appearance;


Radiation crosslinking process belongs to solid crosslinking, and also can be called post-crosslinking process. The degree of crosslinking of radiation crosslinking is controlled by radiation dosage, the uniformity of crosslinking is decided by that of radiation, while the uniformity of radiation is controlled by the computer, so that it has a quite good uniformity of crosslinking;

Large-scale radiation facility is required for radiation crosslinking, and the initial investment on radiation crosslinking production line is relatively large, therefore, the production cost of products is high. PE-Xc pipe has performances of other PE-X pipes such as heat-resisting, cold-resistant and chemically resistant, flexible, as well as other merits like yieldingness, convenient installation and long service life (as long as 50 years); it is also characterized by uniform degree of crosslinking, high chemical purity and good hygiene performance, especially suitable for fluid transportation with high purity requirement like purified water.



热能损耗小、节能、卫生、环保
绿色无污染

Low hot energy loss, energy conservation, hygiene and environmental protection
Green and pollution-free



耐酸、耐碱、耐腐蚀、耐老化
使用寿命长

Acid-resisting,, alkali-resisting,, anti-corrosion and anti-aging
Long service time



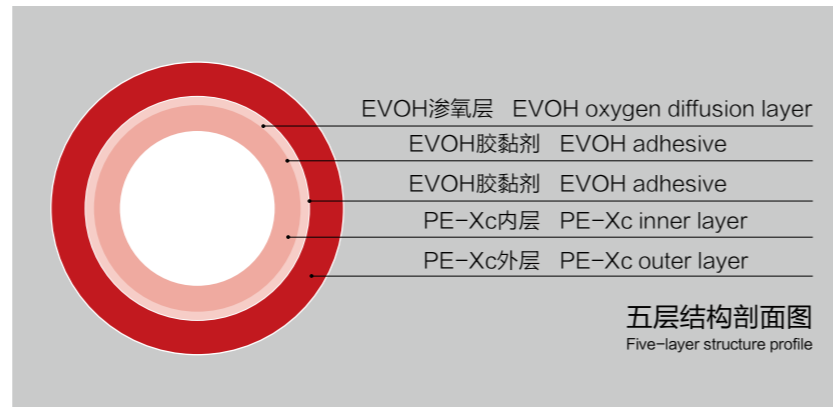
柔韧易弯曲、冷弯应力自消除
方便易安装

Flexibility, yieldingness and self-relieving of cold-bending stress
Convenient installation



防冻裂、防泄漏、不结垢
流水阻力小

Frost crack prevention, leakage prevention and non-scaling
Small flow resistance



技术参数 Technical parameters

最高工作温度 Max. working temperature	最大 95℃ / 恒温 70℃ / 瞬间温度可达 110℃
最大工作压力 Max. working pressure	10bar
最小弯曲半径 Min. bending radius	6 x d
热膨胀系数 Coefficient of thermal expansion	2.0 x 10 ⁻⁴ 1/k
安装温度 Installation temperature	> 5℃
产品寿命 Product life:	50years

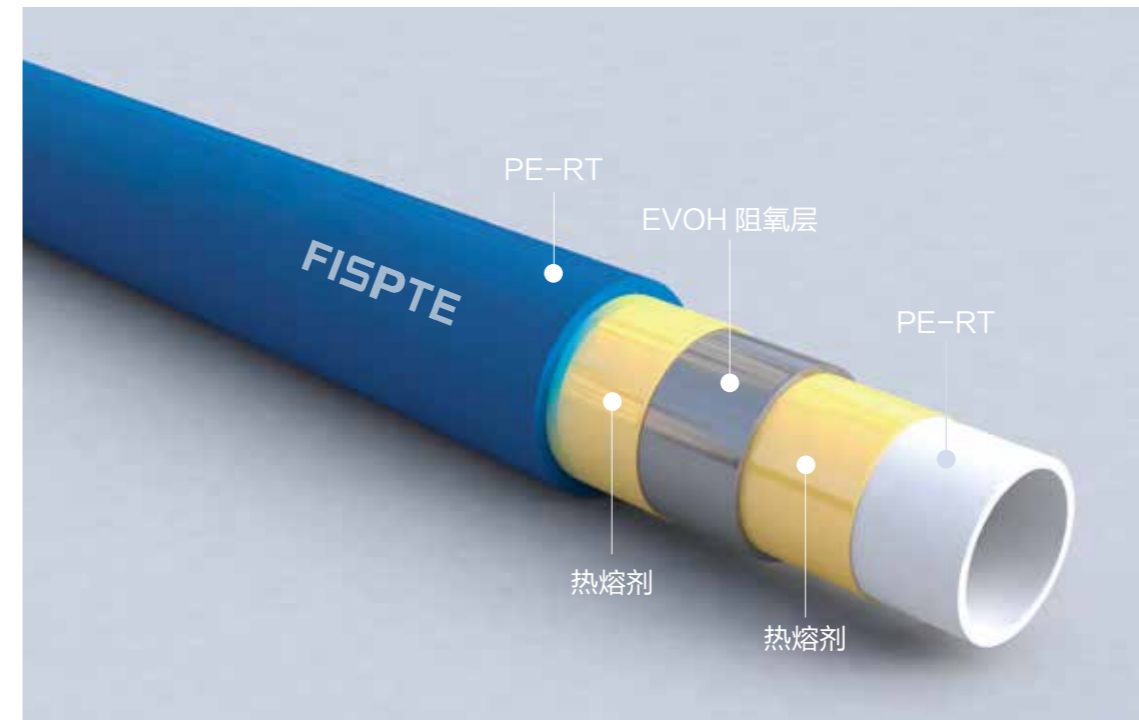
（德国原装进口系列）

PE-RT (5 Layer)
Inverse EVOH Pipe Series
PE-RT (五层) 超柔阻氧管系列
PE-RT/EVOH/PE-RT



产品规格 Product Specification

公称外径 Dn Nominal outside diameter DN	平均外径 Mean outside diameter		管系列 Pipe series		
			S5	S4	S3.2
	Den,min	Den,max	公称壁厚 e _n Nominal wall thickness		
16	16.0	16.3	-	2.0	2.3
20	20.0	20.3	2.0	2.3	2.8
25	25.0	25.3	2.5	3.0	3.5



Product features

Dual-functions of light shading and oxygen barrier;
Hygiene: oxygen penetration required by survival of microorganism is prohibited, so that microorganism in system is inhibited;
Oxygen barrier pipe also has merits of other high-temperature floor heating pipes like anti-corrosion, non-scaling, low hot energy loss, energy conservation, environmental protection, flexibility, yieldingness, good hydromechanics property, long service life, etc.
The pipe is featured by good flexibility, large bending radius, small construction strength and convenient installation; it also has good oxygen barrier performance, which may effectively delay corrosion of the metal part in system, extend the service life of metal part and reduce scaling in pipe system.

产品特点

德国 FISPTTE 菲斯普特 PE-RT 超柔 EVOH (五层) 阻氧地暖管具备遮光、阻氧双重功效；
由于阻止了微生物生存必须的氧渗入，因而抑制了系统中微生物的存在；
阻氧管也同样具有其他高温地暖管材耐腐蚀、不结垢、热能损失小、节能环保、柔韧易弯曲、流体力学性能好、使用寿命长等优点；
管材柔韧性好，弯曲半径大，施工强度小，方便施工。管材具有较好的阻氧性能，可有效延缓系统中金属部件的锈蚀，延长金属部件的使用寿命，并减少管道系统中的结垢。





德国技术支持

PE-Xb/AL/PE-RT PE-Xb 无缝对接焊铝塑压力管

PE-RT/AL/PE-RT PE-RT 无缝对接焊铝塑压力管

RPAP5 铝塑压力管系列

PE-Xb 耐高温交联聚乙烯采暖管

PE-RT 地面辐射采暖管

PP-R 铝塑复合管

PE/AL/PE 燃气专用铝塑管

304 不锈钢燃气管

PP-R 纳米抗菌管

（德国技术支持）

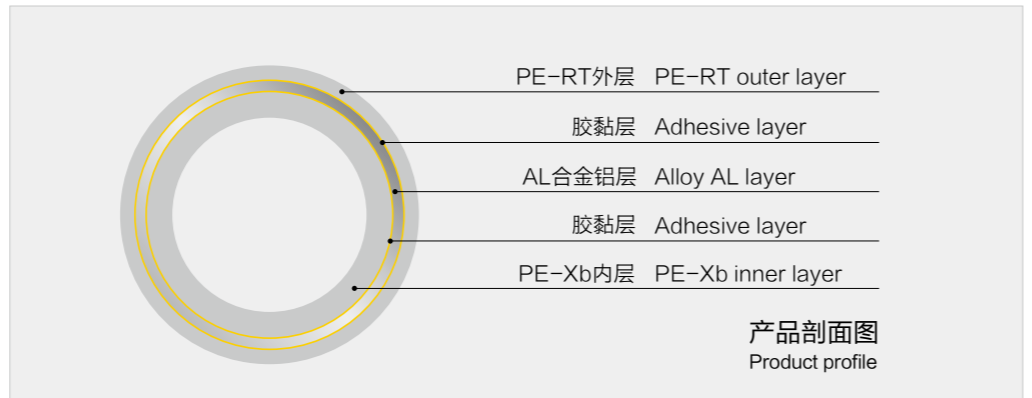
Aluminum-Plastic Composite Pipe Series

PE-Xb 无缝对接焊铝塑压力管 PE-Xb/AL/PE-RT

FISPTe 菲斯普特 PE-Xb 无缝对接焊铝塑压力管，内层采用 PE-Xb 耐高温交联聚乙烯，中间层为加厚铝层，外层为 PE-RT 耐热聚乙烯，具有耐高温、耐高压，带记忆性及抗老化性和更长的使用寿命等优点。采用德国先进的激光全熔无缝焊接技术，具有 100% 的阻氧性能，有效的防护系统氧腐蚀，可广泛应用于壁挂炉分户采暖系统中的地暖铺设和高温散热器联接。FISPTe 菲斯普特始终坚持“严控标准、做专做精、层层把关、品质第一”的质量理念，每一米管道均严格按照 SKZ（南德塑料检测中心）认证要求生产制造，确保 FISPTe 菲斯普特管道在长期工作压力 1.25MPa 温度 95℃ 高温状态下使用寿命长达 50 年。

It is a new butt-welding aluminium-plastic composite pipe, composited by advanced full penetration laser welding and high-performance tackifier. With unique five-layer design, PE-RT(PE-X) as the inner and outer layer and thickened aluminum as the interlayer, it has a better compressive strength, ageing resistance and longer service life. 100% oxygen resistance may ensure an effective protection against the oxygen corrosion of the system. It can be widely applied to the laying of floor heating system and the connection of radiator in the household heating system of wall-hanging stove. German Fispte pipes are completely produced as per the certification requirements of SKZ, to guarantee a service life of 50 years.

Fispte Butt Welding Aluminum-Plastic Composite Pipe Fispte 对接焊铝塑复合管 PE-Xb/AL/PE-RT							
规格 Specification	爆破压力 Burst pressure	管环径向拉力 Radial tension of pipe ring	最小平均剥离力 Min. average peeling force	静液压强度 Hydrostatic strength	长期工作温度 Long-term working temperature	允许工作压力 Safe working pressure	工作年限 Years of working
d./mm	Mpa	N	N	MPa	°C	MPa	year
φ16	8.00	2400	25	2.72	60-95	0.69-1.50	50
φ20	7.00	2600	28				
φ25	6.00	2990	30				
φ32	5.50	3320	35				



Complex and advanced production process

- 1. PE of inner layer is extruded.
- 2. A layer of hot melting agent is covered while inner pipe is extruded.
- 3. Aluminum foil is positioned based on the requirement on aluminum foil of different thickness and then laser welding is adopted.
- 4. A layer of hot melting agent is covered while PE of the outermost layer is extruded.
- 5. PE of outer layer is extruded.

复杂而先进的生产工艺

- 1. 内层聚乙烯挤出
- 2. 内管挤出的同时附上一层热熔剂
- 3. 按照不同铝箔厚度的要求将铝箔定位，并采用德国先进的激光焊接技术
- 4. 在最外层聚乙烯挤出的同时附上热熔剂
- 5. 外层聚乙烯挤出
- 6. 收卷盘管包装



德国 Fispte 铝塑复合管
German Fispte polyethylene aluminum compound pipe (PAP)

Aluminum-Plastic Composite Pipe Series PE-RT 无缝对接焊铝塑压力管 PE-RT/AL/PE-RT



Creep Diagram for 50-year Service Life of Fispte Polyethylene Aluminum Composited Pressure Pipe (simulation test)

All parts are produced according to DVGW-W534 certification, conform to German DIN4102-2 Grade B2 Building Materials Standard, and have passed creep rupture strength test and thermal-cold cycling test.

Fispte pipes are fully automatically produced under a constant and controllable temperature during the whole process. Before warehoused, products will be inspected qualified by special quality control personnel, and products will be access to the market with the highest standard of quality.

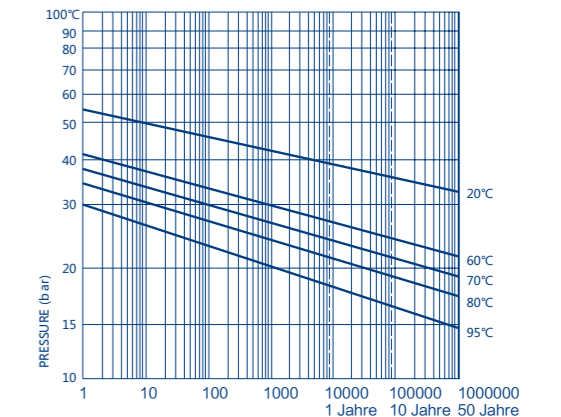
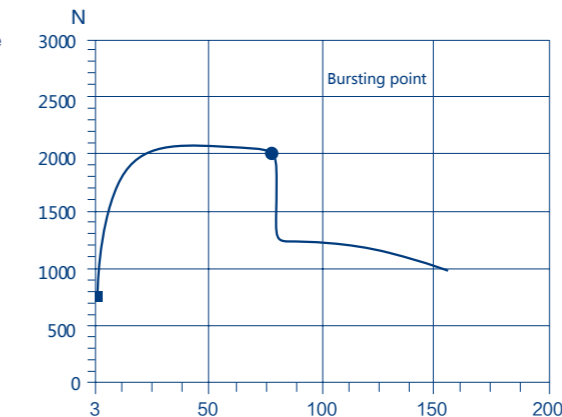
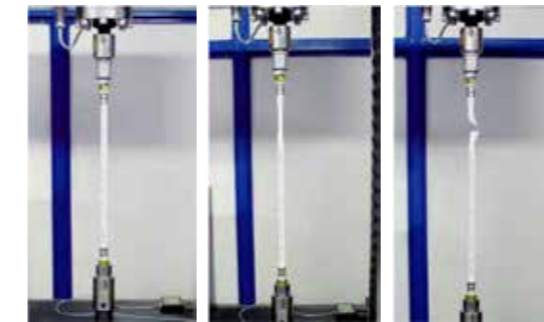
菲斯普特铝塑复合压力管 50年使用寿命蠕变图 (模拟测试)

所有零部件按照 DVGW-W534 认证生产，符合德国 DIN4102-2 建筑材料 B2 级标准，并通过了蠕变断裂强度试验和冷热循环试验。

菲斯普特管道的整个生产过程都是在一个恒定和可控的温度下进行的，而且是全自动的。在产品入库前，需要经过专门的质检人员检验合格，以最高标准的质量作为产品进入市场的标准。

菲斯普特铝塑复合压力管耐拉拔测试

Tensile Test of Fispte Polyethylene Aluminum Composited Pressure Pipe (200Kg=2141N)





双层热熔管件 专利号：ZL 2010 3 0143787.X ZL 2010 3 0143788.4

带丝管件钢圈保护设计管件更加牢固，外丝管件的衍生料防渗漏保护层设计，衍生料端口保证水接触不到带丝管件的金属部分，大大保证了管路系统的密封性，永不渗漏！

With wire tube steel protection design fitting more solid, Outside the wire pipe fittings derived material leakage protective layer design, material derived from port ensure water can't contact with metal parts of the pipe, greatly ensure the sealing of piping system, never leakage!



德国技术支持

RPAP5 pipe fitting series RPAP5 (PE-RT/AL/PE-RT) 对接焊铝塑压力管系列

产品特点

FISPTE 菲斯普特 RPAP5 铝塑压力管采用韩国 LG SP980 PE-RT 管道原料，严格按照 CJ/T 159-2015 国家行业标准生产制造。管材与管件所用材料相同，管件熔接端口是双层环壁结构的承口，分别与管材内外层熔接；承口内置有衬套，熔接时，衬套对内层壁具有支撑作用，从而将管材与管件良好熔合连接在一起，连接牢固，不渗漏，无腐蚀，强度高，是铝塑压力管连接技术和方式的创新与突破。双层热熔管件拥有国家外观设计专利，实用新型专利。

Product features

RPAP5 aluminous model pressure PE pipe with South Korea SK company - RT pipeline is special material production, pipe and fitting materials for the same; Port is double wall pipe welding structure of the socket, and pipe welding layers respectively; With liner socket welding, bushing with supporting role on the inner wall, thus connecting pipe and fitting good fusion together, connection is firm, no leakage, no corrosion, high strength, is aluminous model pressure pipe connection technology and the way of innovation and breakthrough.

- 连接牢固——双层热熔连接，永不渗漏。
管件的承插口与管材内外层热熔连接，管材、管件融为一体，其连接处的强度高于管材本身。
- 安装快捷——提高施工效率
只须整圆，无须倒角，安装速度快，一次安装合格率高
- 接头可暗埋——灵活的施工方案
热熔接头安全可靠，可暗埋于墙内、地板填充层内、方便管道系统的设计和安装。

Low connection solid - double hot melt connection, never leakage.
Pipe socket and the pipe inner and outer layer of hot melt connection, pipes, pipe fittings, the joint strength is higher than the pipe itself.
Low fast installation, improve construction efficiency
Only the whole round without chamfering, fast installation and an installation qualification rate is high
Low joint can be dark bury, flexible construction scheme
Hot melt connection safe and reliable, can fill layer of dark buried in wall, floor, convenient in design and installation of piping system.



德国技术支持

PE-Xb Floor Heating Pipe Series

PE-Xb 耐高温交联聚乙烯采暖管

菲斯普特耐高温交联聚乙烯采暖管特点

FISTPE菲斯普特PE-X管是耐高温交联聚乙烯管材，它是通过化学或物理方法，为提高聚乙烯的性能而对聚乙烯进行交联，通过聚乙烯分子间的共价键形成一个更稳定的网状三维结构，迅速改善了聚乙烯树脂的性能，如：耐热性、耐磨性、耐化学药品性、耐应力开裂性及抗老化性等一系列物理与化学性能，从而大大提高其耐高温性能，使它能在95℃高温下长期使用。

PE-X管主要可以分为PE-Xa、PE-Xb与PE-Xc三种，分别是过氧化物交联聚乙烯，硅烷交联聚乙烯和辐射交联聚乙烯，其中过氧化物与辐射交联的交联度较高，PE-X管耐高温性能与耐压性、导热性与抗冲击性较好，目前在我国高温散热器采暖系统中使用比较广泛。

Characteristic

Ordinary high density polyethylene (HDPE, MDPE) pipe, its large molecules is linear structure, the biggest drawback is the heat resistance and creep resistance is poor, so regular high-density polyethylene pipe is not suitable for conveying medium temperature 45 °C. Put PE pipe - Xb feith ordinary polyethylene in the presence of organic peroxide, after a certain temperature and mechanical force, after polymerization for a quick silane crosslinked polyethylene. Make PE - Xb pipe has the characteristics of heat resistance pressure, long-term use of up to 95 °C temperature, heating pipe system more secure, use more efficient.

- 不含增塑剂，不会霉变和滋生细菌；
- 耐热性好，常规工作温度可达95℃，能够经受110℃环境下8000小时的测试；
- 耐压性能好，有常温下工作压力12.5bar和20bar两个等级；
- 耐腐蚀性能好，能经受大多数化学品的腐蚀；
- 隔热效果好，节约能源；
- 能够任意弯曲，不会脆裂；
- 在同等条件下，水流量比金属管大；
- 抗蠕变强度高，可配金属管，可省去连接管件，降低安装成本，便于维修；
- 交联聚乙烯管的重要特性在于其强度和耐温性能，特别是其蠕变强度，其强度随时间的变化不显著，寿命可达50年之久。

no plasticizers, no moldy and bacteria.

The heat resistance is good, the conventional working temperature can reach 95 degrees, and it can withstand the test of 8000 hours under 110 degree temperature.

It has good withstand voltage performance. There are two grades of working pressure 12.5bar and 20bar at normal temperature.

It has good corrosion resistance and can withstand most chemical corrosion.

The effect of heat insulation is good and energy saving is saved.

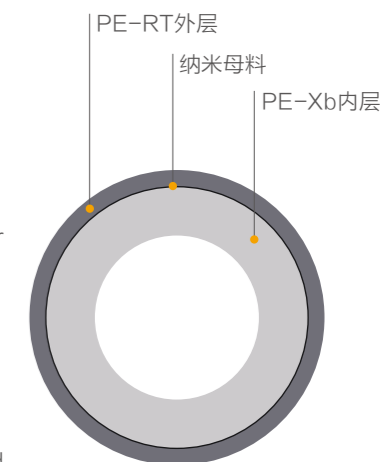
It can be bent arbitrarily and not brittle.

Under the same conditions, the water flow rate is larger than that of the metal tube.

It has high anti creep strength and can be equipped with metal pipes, which can avoid connecting pipe fittings, reduce installation costs and facilitate maintenance.

The main characteristics of XLPE pipe are its strength and temperature resistance, especially its creep strength.

Its strength does not change significantly with time, and its life span can last up to 50 years.



三层结构剖面图

多种颜色可供选择



德国技术支持

PE-RT Floor Heating Pipe Series

PE-RT 三层复合精品地暖管



抗老化, 寿命长

70°C, 0.8MPa 条件下, 可安全使用 50 年以上

Ageing resistance & long service life

It can be used for over 50 years under 70°C and 0.8Mpa.



柔韧易弯 施工方便

弯曲半径小 (R 最 ≤ 5D), 应力可以很快得到松弛, 可热熔连接, 维修方便。

Flexibility and convenient installation

With small bending radius (R ≤ 5D), the stress can be relaxed rapidly, and it can be connected via hot melting, easy for maintenance.



内壁光滑 更低流阻

采用韩国晓星公司原装进口专用原料, 精选高精度生产设备, 令内壁更光滑, 流阻更低, 冷热水输送更流畅, 有效降低内壁水垢形成, 减少热量损耗

Lower flow resistance with smooth inner wall

Dedicated raw materials imported from HYOSUNG and high-precision production equipment are adopted to make the inner wall smoother, flow resistance lower, cold and hot water transport more fluent, effectively reduce scale formation on inner wall and reduce thermal losses.

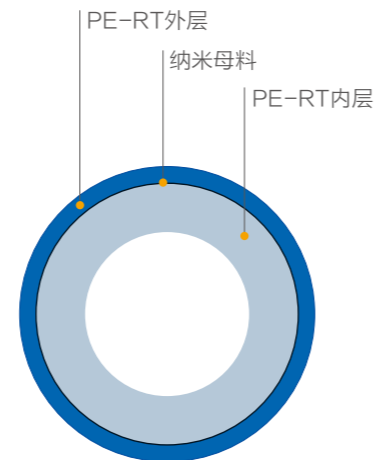


耐寒防冻裂 抗脆裂

抗低温冲击强度性极好, 具备优秀柔韧性, 且柔韧性和长期蠕变性能好。在低温 -40°C 使仍具有很好的抗冲性, 不脆裂, 可有效杜绝低温时外力给管材造成的损伤。

Cold resistance, frost crack prevention and embrittlement resistance

It has good low-temperature impact resistance, excellent flexibility and good long-term creep behavior. It also has good impact resilience and embrittlement resistance under -40 °C , which may effectively avoid the damage on pipes from external force under low temperature.



三层结构剖面图



德国技术支持

PE-RT EVOH
Floor Heating Pipe Series
PE-RT 三层阻氧地暖管



EVOH 三层阻氧地暖管
EVOH three layer oxygen resistance tube



三层共挤抗紫外线精品地暖管
Three layer co extrusion anti ultraviolet boutique tube



二层共挤本色透明工程地暖管
Two layer coextrusion engineering tube

产品简介

FISPTe 菲斯普特 PE-RT 地暖管是一种采用特殊的分子设计和合成工艺生产的一种中密度聚乙烯管材，它采用乙烯和辛烯共聚的方法，通过控制侧链的数量和分布得到独特的分子结构，来提高 PE 的耐热性。由于辛烯短支链的存在使 PE 的大分子不能结晶在一个片状晶体中，而是贯穿在几个晶体中，形成了晶体之间的联结，它保留了 PE 的良好柔韧性，高热传导性和惰性，同时使之耐压性更好。PE-RT 管可以用于 ISO10508 中规定的所有热水管的使用级别。

Product introduction

PE-RT is a medium density polyethylene produced with special molecular designing and synthetic process; with copolymerization of ethylene and octylene, it improves the heat resistance of PE by obtaining the unique molecular structure via quantity and distribution control of side chains. Macromolecule of PE runs through several crystals, rather than being crystallized in one tabular crystal, thus linking crystals due to the existence of short-chain branch of octylene, it retains good flexibility of PE, high thermal conductivity and inertia and makes its resistance to pressure better. PE-RT pipe can satisfy all levels of hot water pipes specified in ISO10508.

技术参数 Technical Parameters

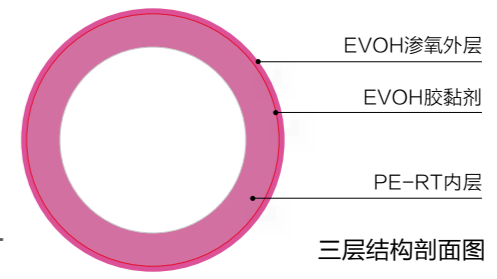
技术性能	测试值	执行标准
抗拉屈服应力	23Mpa	ISO527
抗裂伸长率	≥ 350	ISO527
1% 弹性模量	750Mpa	ISO178
60℃热传导系数	0.42w/k-m	DIN52612
可弯曲半径	7Xd	DIN4726
拉伸弹性模量	850Mpa	ISO527
氧化诱导时间 (210℃)	≥ 40min	ISO11357-6
FNCT (Arkopat.80℃)	≥ 2000h	ISO16770



德国技术支持

PE-RT EVOH Floor Heating Pipe Series

EVOH 三层阻氧地暖管 PE-RT/EVOH/PE-RT



菲斯普特 EVOH 三层阻氧地暖管特点

FISPTTE 菲斯普特 EVOH 三层阻氧地暖管在高温条件下有很高的静液压强度，低温条件下不必担心脆裂；加工时流动性好，焊接时具有很好的熔体强度，中间的 EVOH 阻氧层有效地隔绝了氧气和酸碱物质的渗入对管道及系统的腐蚀，延长采暖系统的使用寿命。管子内壁光滑，有效减小阻力，不易产生水垢，保证超高的热传导率。卓越的耐寒抗冻性能，冬季不会冻裂，易弯曲，施工方便，正成为国际最流行的新一代采暖管道系统首选产品。

Product Features

Fispte oxygen barrier (EVOH) pipe has a high hydrostatic strength under high temperature, and won't be embrittled under low temperature; it has a good fluidity during processing and good melt strength during welding, the middle EVOH oxygen barrier layer can effectively prevent the penetration of oxygen and acid-base materials from corroding the pipe and system, and thus extend the service life of the system. The smooth inner wall of the pipe may effectively reduce resistance, prevent generation of incrustation and ensure high pyroconductivity. The product is also characterized by excellent cold-resistant performance, flexibility and convenient installation, and is becoming a new fashionable heating pipe system in Europe.

技术参数

项目	试验环应力 (Mpa)	试验温度 (°C)	试验时间 (h)	指标
纵向回缩率	-	110	$e_n \leq 8\text{mm}$ $8\text{mm} \leq e_n \leq 16\text{mm}$ $e_n > 16\text{mm}$	3%
静液压试验	10.0 3.55 3.50	20 95 95	1 165 1000	无破损、无渗漏
静液压状态下热稳定性试验	1.90	110	8760	无破损、无渗漏
熔体质量流动速率	MFR (190°C, 2.16kg) g/10min			变化率≤原料的 30%

德国技术支持

PE-RT EVOH Floor Heating Pipe Series

EVOH 三层阻氧管 PE-RT/EVOH/PE-RT

产品特点

- 具备遮光、阻氧双重功效；
- 卫生，由于阻止了微生物生存必须的氧渗入，因而抑制了系统中微生物的存在；
- 阻氧管也同样具有其他高温地暖管材耐腐蚀、不结垢、热能损失小、节能环保、柔韧易弯曲、流体力学性能好、使用寿命长等优点；
- 管材柔韧性好，弯曲半径大，施工强度小，方便施工。管材具有较好的阻氧性能，可有效延缓系统中金属部件的锈蚀，延长金属部件的使用寿命，并减少管道系统中的结垢；

PRODUCT FEATURES

Low with shading, oxygen double effect;
 Low health, because to prevent microbial life must oxygen infiltration, thereby inhibiting the presence of microorganism in the system;
 Oxygen tube also have other high temperature low resistance floor heating pipe corrosion resistance, no scaling, small heat loss, energy conservation, environmental protection, flexible, easy to bend, fluid mechanics performance is good, long life and other advantages;
 Tubing and low flexibility, bending radius is big, the construction intensity is small, convenient to construction. Oxygen pipe has good resistance performance, can effectively delay the rusted metal parts in the system, extend the service life of metal components, and reduce scaling in the pipeline system;

应用领域

适用于地暖及散热器连接中对系统环境有阻氧要求的管路连接，主要是防止氧分子进入热水系统中对系统的构件造成腐蚀，延缓系统的使用寿命。

APPLICATION SCOPE

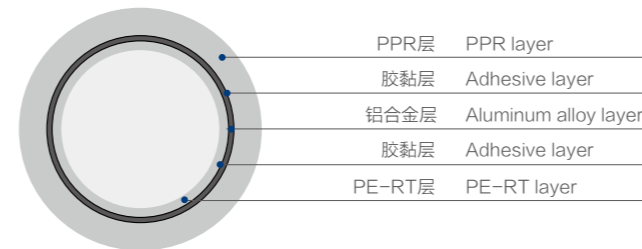
To the system environment suitable for floor heating and radiator connection pipeline connection with resistance oxygen requirements, main is to prevent the oxygen molecules into the hot water system for the system components caused by corrosion, the service life of the system.



德国技术支持

PP-R Aluminum-Plastic Composite Pipe Series

PP-R 铝塑复合管系列 PE-RT/AL/PP-R



产品简介

FISPTTE 菲斯普特 PP-R 铝塑复合管是一种由中间纵焊铝管，外层采用韩国晓星 200p 聚丙烯，内层为韩国 LG SP980 PE-RT 耐热聚乙烯塑料以及层与层之间的热熔剂共挤复合而成的新型管道。PE-RT 耐热聚乙烯是一种无毒，无异味的塑料，具有良好的耐热耐压抗冻性能，中间层纵焊铝合金使管子具有金属的耐压强度，耐冲击能力使管子易弯曲不反弹，具有良好的稳态性能，长期工作温度 95℃，使用寿命 50 年，是采暖系统主管道与明装散热器管道的首选产品。

Product introduction

PP-R PAP is a new pipe with aluminum pipe longitudinally welded in middle layer, polypropylene for outer layer, PE for inner layer and coextrusion of hot melting agent between layers. PE is a non-toxic plastic without peculiar smell, and has good impact resistance. Aluminum alloy longitudinally welded in middle layer allows pipes to possess the compression strength of metal, the impact resistance makes pipes bendy without bouncing; PAP, combining features of metal pipe's firmness and pressure resistance and plastic pipe's acid-base resistance and corrosion resistance, is a model of new pipes.



Special Aluminum-Plastic Pipe for Gas

燃气专用铝塑复合管 PE/AL/PE

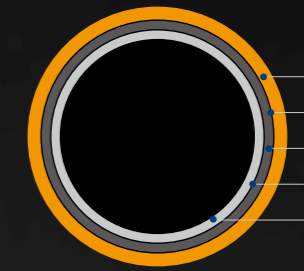
德国技术支持

产品特点

1. FISPTe 菲斯普特燃气专用铝塑复合管，外层采用 100% 进口 PE 聚乙烯原料，内层为燃气用 PE 聚乙烯专用料，嵌入金属层为无缝对接焊的铝合金复合管，耐高温、耐压、抗冻性能强。在长期工作温度 60°C、工作压力 0.4MPa 的条件下，使用寿命远超过 50 年。
2. 安全不渗气：菲斯普特燃气专用铝塑复合管中间金属铝层为独有的激光无缝对接焊技术，杜绝气体渗漏，确保燃气输送安全。
3. 施工简便：菲斯普特燃气专用铝塑复合管成盘供应，易弯曲不反弹，可绕梁抱柱，接头少，在实际安装中简易方便，尤其适用燃气一户一表工程。

Product features

1. Long service life: strong temperature resistance and pressure-resistant properties; the service life of Fispte dedicated PAP for gas can reach for more than 50 years under 60°C and 0.4Mpa;
2. Safety and zero-air permeability: Fispte dedicated PAP for gas has a metallic aluminum layer in the middle, which may completely eradicate gas leakage and ensure gas transmission safety;
3. Convenient installation: Fispte dedicated PAP for gas is bendy without bouncing, can be bent around beams and columns, has less joints and is quite easy in practical installation, especially suitable for one-family-one-meter gas engineering.



PE外层	PE outer layer
胶黏层	Adhesive layer
铝合金层	Aluminum alloy layer
胶黏层	Adhesive layer
PE内层	PE inter layer





CHINA GAS ASSOCIATION
中国城市燃气协会会员单位



China Quality Supervising and Test Center For Gas Appliances (CGAC)
通过国家燃气用具质量监督检验中心检测

德国技术支持

SUS 304 Stainless Steel Gas Pipe

SUS 304 不锈钢燃气波纹管

满足用户个性化需求

采用埋墙、暗敷、明装多种安装方式。

耐用永久性

管材采用不锈钢 06Cr19Ni10 (SUS 304) 材料制造，管外包覆阻燃 PVC 保护套，确保安全使用寿命超过 50 年。

具有补偿性

避免地震，建筑物沉降和天气季节变化类动物破坏引起的意外而造成的燃气泄漏

安装方便

可随意剪取，随意弯曲而内径流量保持不变，能在狭窄的空间自由弯曲和通过。

可先装修后铺管

方便用户对铺管时间的选择。

增加安全性

具有长度任选性，管体中部没有接口，减少连接点也就是杜绝了燃气泄漏。

适用范围

介质：天然气、人工煤气、石油液化气、空气混合气、沼气、医药、化工、水暖等。

压力：小于 0.2Mpa (一般室内低压燃气管道)

Satisfy user's individual demand

It can be installed by being buried in wall, hidden laying, open installation, etc..

Durable

The pipe is made of stainless steel 06Cr19Ni10(304) material, and externally covered with antifracking PVC protective casing to ensure that the service life may exceed 50 years.

Compensatory

It can avoid gas leakage which is caused by accidents induced by earthquake, building settlement, weather and seasonal variation.

Convenient installation

It can be sheared and bent at will with the flow of inner diameter unchanged, and also can be freely bent and get through in narrow space.

Pipe can be laid after decoration.

Convenient for users to select pipe laying time.

Increase safety

The length is optional, there is no connector in the middle pipe, and reduction of connecting joint is to avoid gas leakage.

Range of Application

Medium: gas, manufactured gas, LPG, air mixture, marsh gas, medicine, chemical engineering, water heating, etc..

Pressure: less than 0.2Mpa (general indoor low pressure gas pipeline)



燃气管的安全性是重中之重。
菲斯普特，一切深思熟虑，力求完美。
经过严格测试，层层把关，
您的安全最重要。

Safety of gas pipe is top priority.
Fispte with deep consideration strives for perfection.
Products are strictly tested and checked in each link.
Your safety is the most important.

FISPTTE | www.fispte.com



德国技术支持

SUS 304 Stainless steel corrugated pipe

SUS 304 不锈钢水用波纹管

产品特点

FISPTe 菲斯普特 SUS 304 不锈钢波纹管作为一种柔性耐压管件，安装于液体输送系统中，用以补偿管道或机器、设备连接端的相互位移，吸收振动能量，能够起到减振、消音等作用，表面呈现亚光，不生锈，含镍量高，耐腐蚀性超高。但 304 是用于食品生产设备，所以健康安全性能好。

不锈钢波纹管特性：具有良好的柔软性、耐蚀性、耐高温、耐磨损、抗拉性、防水性并提供优良的电磁屏蔽性能。不锈钢软管能自由地弯曲成各种角度和曲率半径，在各个方向上均有同样的柔软性和耐久性；不锈钢软管节距之间灵活，有较好的伸缩性，无阻塞和僵硬现象。不锈钢穿线软管各节边扣之间具有一定的抗拉力，以防软管的破坏导致软管内部铺设的线路暴露在外，轴向拉力能承受公称内径的 6 倍以上。

Product features

As a flexible pipe fittings, stainless steel bellows are installed in the liquid conveying system to compensate for the mutual displacement of the pipe or machine and equipment, absorb vibration energy and play the role of vibration damping and silencing. It has many characteristics such as good flexibility, light quality, corrosion resistance, fatigue resistance, high temperature resistance and so on. Stainless steel hose features: good softness, corrosion resistance, high temperature resistance, abrasion resistance, tensile resistance, water repellency and excellent electromagnetic shielding performance. The stainless steel hose can be flexibly bent into various angles and radius of curvature. It has the same softness and durability in all directions; the stainless steel hose pitch is flexible, has good scalability, no obstruction and stiffness. There is a certain tensile strength between the joints and the buckles of the stainless steel thread hose, so as to prevent the failure of the hose to expose the lines laid inside the hose, the axial tension can bear more than 6 times the nominal diameter of the hose.





德国技术支持

PP-R NANO sterilization pipe series

PP-R 纳米抗菌冷热水管

应用领域

APPLICATION SCOPE

- 住宅冷热水管道系统
- 纯净水、饮用水管道
- 压缩空气用管
- 其他工业、农业用管

Residential cold and hot water pipeline system

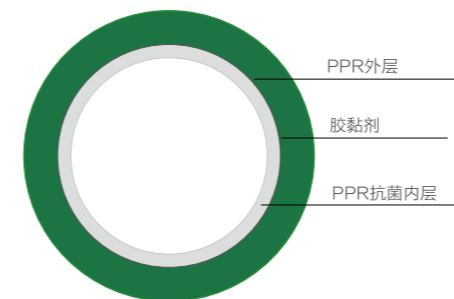
Pure water, drinking water pipe

Compressed air pipe

Other industrial and agricultural pipes

产品结构

PRODUCT STRUCTURE



德国技术支持

PP-R NANO sterilization pipe series 纳米抗菌 PPR



优质黄铜 安全环保

拒绝开裂-嵌件采用HPd59-1环保黄铜，经红冲工艺精制而成，铜件加大，壁厚增加，承压能力远远优于国际标准。
永不脱落-12道防滑齿设计，确保嵌件与塑件紧密相连，无论热胀冷缩，永不脱落！
过拧保护-螺纹底部采用防过拧挡圈设计，防止因丝牙过拧导致开裂。

Safety and environmental protection of high quality brass

The refusal crack - inlay is made of HPd59-1 green brass, refined by red blanking process, increased copper parts, increased wall thickness, and pressure bearing capacity far superior to international standards. Never shedding - 12 slip tooth design to ensure that the insert and the plastic parts are closely connected, no matter the heat expansion and contraction, never fall off! A screw thread bottom with anti - protection ring screw design, screw to prevent lead tooth crack.

产品概述

菲斯普特纳米抗菌PP-R冷热水管材、管件是建立在PPR管材基础上的一种新型环保绿色产品，通过特殊工艺和设备采用复合共挤，低温高速生产的高性能管材。该管材为二层结构，在内层管壁加入的是一种以银离子为有效成分的抗菌剂，该材料通过破坏微生物的呼吸系统及细胞壁功能来杀菌，同时其分子结构中含有羟基，由于卤原子的负电性作用，使该羟基的酸性显著提高，加强了杀菌能力，并具有高效广谱杀菌功效，从而使通过管材的水质得到提高，属于名副其实的绿色环保产品。

PRODUCT INTRODUCTION

Fispte nano-antibacterial PP-R cold hot water pipe and pipe fitting are new type green and environmentally-friendly products based on the PPR pipe. As a high-performance pipe produced with composite coexistence under low temperature in a high speed, this pipe has a two-layer structure. An antibacterial agent with silver ion as effective composition is added inside the pipe wall. This material features sterilization by damaging the respiratory system and cell wall of microorganisms. At the same time, its molecular structure contains hydroxy, whose acidity significantly improves due to the electronegativity of halogen atoms, enhancing the bactericidal ability. It has the efficient broad-spectrum bactericidal effect, and this improves the water quality flowing through the pipe. Thus, it is truly a green and environmentally-friendly product.



德国技术支持

PP-R NANO sterilization pipe series 纳米抗菌 PPR



环保无污染



流体阻力小



抗低温耐高压



热熔连接



保用至少50年

产品特点

- 卫生、无毒:本产品属绿色建材, 可用于纯净水、饮用水管道系统
- 耐腐蚀、不结垢, 输送阻力小, 流量稳定
- 外形美观, 产品内外壁光滑, 流体阻力小, 色泽柔和, 造型美观
- 具有抗菌作用, 对大肠杆菌、金黄色葡萄球菌的抗菌率达90%以上
- 民用建筑工程中长期工作水温 $\leq 70^{\circ}\text{C}$, 最高水温 $\leq 80^{\circ}\text{C}$, 系统工作压力可达0.8MPa
- 保温节能, 产品导热系数仅为金属管的二分之一, 用于热水管保温节能效果极佳;
- 质量轻, 比重仅为钢的1/8, 便于搬运、安装;
- 安装采用热熔连接方式, 方便、可靠、环保、安全;
- 使用寿命长, 在正常的压力和温度下使用, 使用寿命可达50年。

PRODUCT FEATURES

Hygienic and non-toxic: this product, as a green building material, can be applied to the pipe system of purified water and drinking water.

It features corrosion resistance, no scaling, small transporting resistance, stable flow.

With nice appearance, the smooth inner and outer walls are characterized with small flow resistance, soft color and beautiful modelling.

With antibacterial action, the antibacterial rate against escherichia coli and staphylococcus aureus reaches above 90%.

Under water working temperature $\leq 70^{\circ}\text{C}$ and the highest water temperature $\leq 80^{\circ}\text{C}$ in the medium and long term in the civil building engineering, the work pressure of the system may reach 0.8Mpa.

Featured by heat preservation and energy conservation, the heat conductivity coefficient of the product is only 1/200 of metal pipes, and it may play an impressive effect of heat preservation and energy conservation when applied to hot water pipes.

This light product with specific gravity of 1/8 of the steel is easy to be handled and installed.

Heat melt connection is adopted in installation, which is convenient, reliable, environmentally-friendly and safe.

Heat melt connection is adopted in installation, which is convenient, reliable, environmentally-friendly and safe.



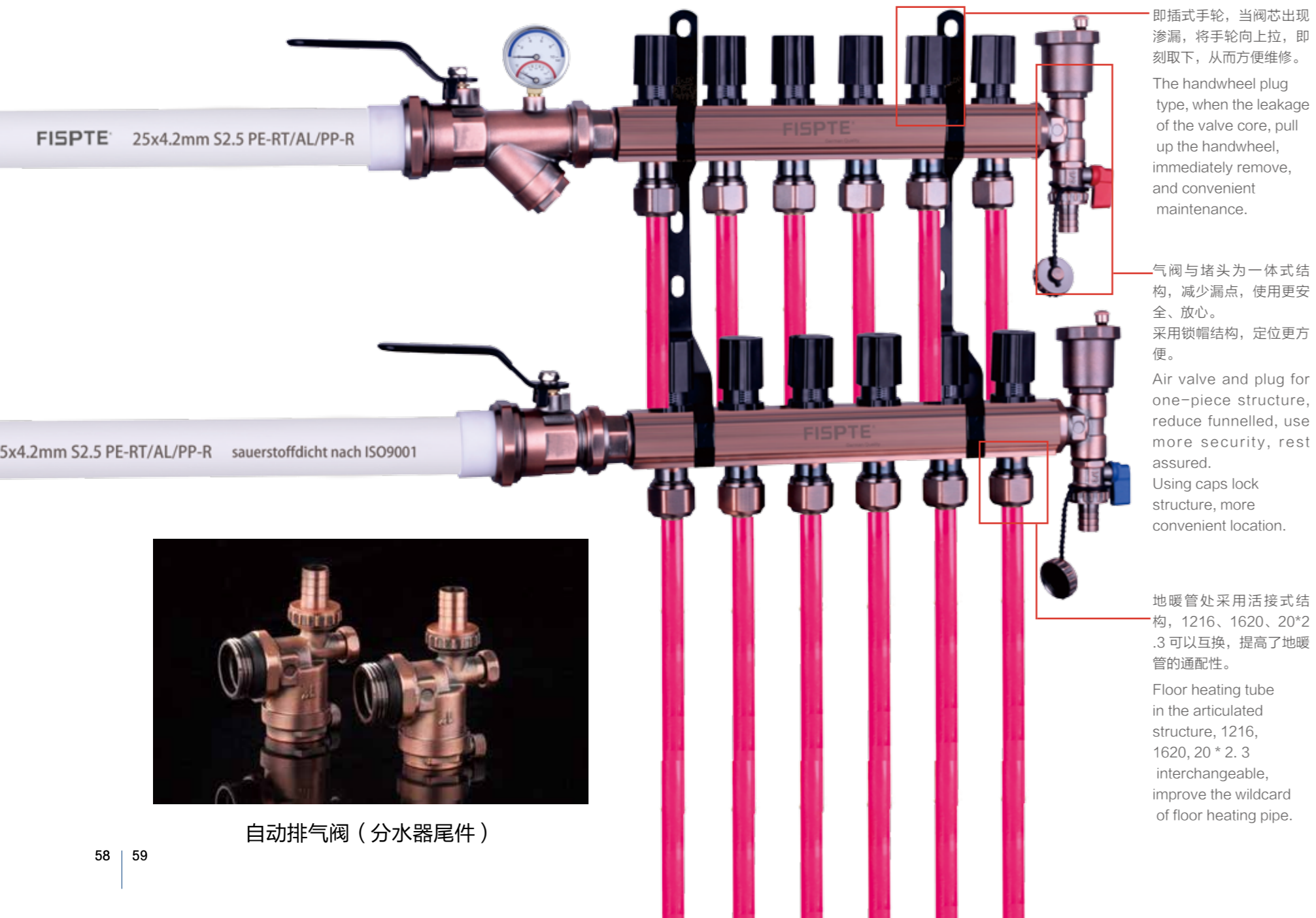
德国 Fispte 带给您 不仅仅是温暖 更是不一样的舒适

我们是 Fispte
值得您信赖的德国暖通管道定制专家
采用德国先进制管技术
掌握德国优化的质量管控系统
运用创新的国际化服务理念
为您精心定制人性化的解决方案
重视中国市场的全面扶持与发展
致力于打造让您感到满意的
中高端暖通管路系统
Fispte 菲斯普特能带给您的
不仅仅是温暖

German Fispte brings you warmth and distinctive comfort

Fispte,
reliable German customizing expert of HVAC pipes,
with advanced German pipe manufacture technology
and optimized German quality control system,
applies innovative international service concept
to customize humanized solution for you.
Focusing on the comprehensive support and development of Chinese
market,
Fispte is devoted to creating satisfactory
high and mid end HVAC pipe system for you.
Fispte can bring you more than warmth!





即插式手轮，当阀芯出现渗漏，将手轮向上拉，即刻取下，从而方便维修。

The handwheel plug type, when the leakage of the valve core, pull up the handwheel, immediately remove, and convenient maintenance.

气阀与堵头为一体式结构，减少漏点，使用更安全、放心。采用锁帽结构，定位更方便。

Air valve and plug for one-piece structure, reduce funnelled, use more security, rest assured.

Using caps lock structure, more convenient location.

地暖管处采用活接式结构，1216、1620、20*2.3可以互换，提高了地暖管的通配性。

Floor heating tube in the articulated structure, 1216, 1620, 20 * 2.3 interchangeable, improve the wildcard of floor heating pipe.



自动排气阀（分水器尾件）

德国技术支持

Forging (Antique Brass) Sub-Catchment Devices A8-25

锻造一体（古铜色）分集水器 A8-25

锻造一体（古铜色）分集水器 A8-25

分集水器采用优质黄铜 (CW617N) 为主体，连接件与螺纹连接部分配件的自体材料也均为锻造黄铜，最大程度的降低了漏水的可能性。分集水器在外表面做古铜色处理，保证了使用的同时，大幅度提高美观性，有效减少游离基产生，延长分集水器使用寿命。分集水器可以通过调节每一路的流量对每个房间进行温度控制。

Forging(Antique Brass) Sub-Carchment Devices A8-25

Water distribution-collection device is mainly made of high brass (CW617N), and the main materials of adapting pieces and threaded connection fittings are also forged brass, which reduces the possibility of water leakage to the greatest extent. Water distribution-collection device is externally covered with antique brass to ensure application, greatly improve aesthetic property, effectively reduce the generation of free radical and prolong the service life of water distribution-collection device. Temperature of each room can be controlled by water distribution-collection device by adjusting the flow of each channel.

技术参数 Technical parameters

材质 Material	黄铜 Brass
适用介质 Applicable medium	水、非腐蚀性液体、饱和蒸汽 Water, non-corrosive fluid and saturated steam
最大工作压力 Max. working pressure	1.6Mpa
介质温度 Max. working pressure	-20℃ ≤ t ≤ 120℃
主管接口 Connector of main pipe	1 “螺纹 1 “thread
直管接口 Connector of straight pipe	φ 16 / φ 20
主管通径 Diameter of main pipe	31mm
直管间距 Space between straight pipes	48mm





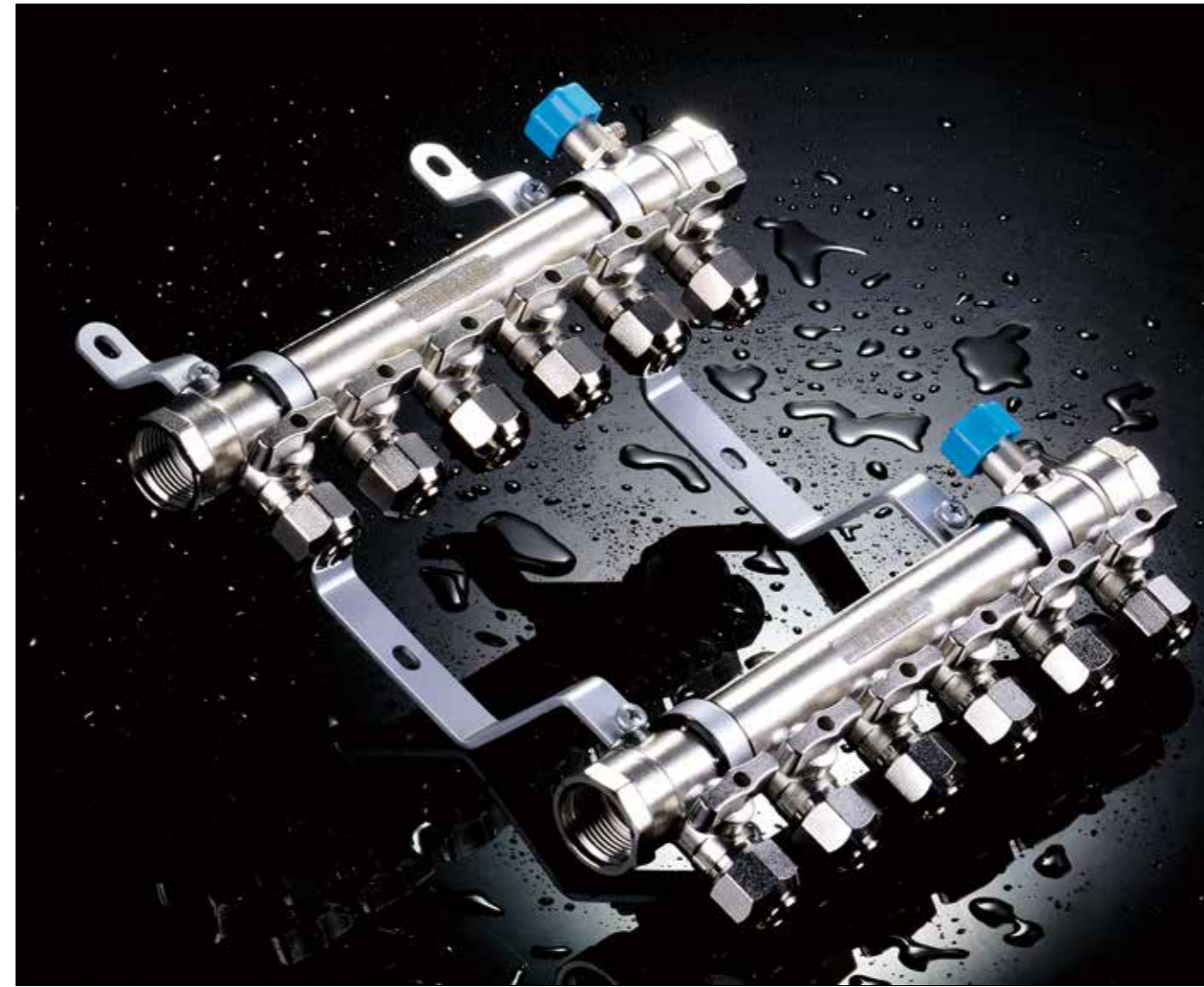
德国技术支持

Forging (TEMP Auto-Control) Sub-Catchment Devices A7-25

精品型材（自动温控高位下水型）分集水器 A7-25

FISPTE 菲斯普特高位下水型分集水器，采用 HPb59-1 黄铜精锻，可分为铜本色和古铜色两种；产品整体有 2-8 路，9 路以上可以任意拼接；口径：1 寸，DN25，公称压力：PN10，间距 50mm；可任意选配 $\Phi 1620$ 或 $\Phi 1216$ 出水口；采用活接式出水口，便于管道清洗；适合水或浓度不大于 60% 的乙二醇；主杠与支管无缝连接，杜绝泄漏；可手动调节流量，如配置相应的电热执行器和房间温控器，可达到根据房间温度控制系统中每个支路热水的开启或关闭，主杠经过高温回火与表面保色处理，能有效消除机械加工时产生的应力，防止冻裂或拧裂。阀芯采用高位下水，可有效杜绝集中供暖系统中的泥沙污垢进入地暖管道而影响使用寿命。

1-inch high-quality pipe with one-time forging process; The product includes 2 channels-8 channels, and that with more than 9 channels can be combined at will; Caliber: 1 inch, DN25; nominal pressure: PN10; interval: 50mm; $\Phi 1620$ or $\Phi 1216$ water outlet can be selected at will; Loose joint water outlet is adopted to facilitate pipe cleaning; HPb59-1 brass is adopted with precision forging, and it includes the natural color of brass and nickel plating; Suitable for water or ethanediol with concentration not larger than 60%; Main cylinder and branch pipes are seamlessly connected to avoid leakage; The flow can be regulated manually, and if relevant electrothermal actuator and room temperature controller are equipped, the opening or closing of hot water of each branch in system can be controlled based on the room temperature; The main pipe is processed with high-temperature tempering and color retaining.



德国技术支持

Forging (Nickelage) Sub-Catchment Devices A3-25

锻造一体（镀镍）分集水器 A3-25

FISPTE 菲斯普特锻造一体（镀镍）分水器为一次锻压成型工艺；产品整体有 1-9 路，10 路以上可以任意拼接；口径：1 寸，DN25，公称压力：PN10；可任意选配 $\Phi 1620$ 或 $\Phi 1216$ 出水口；采用活接式出水口，便于管道清洗；HPb59-1 黄铜精锻，表面做镀镍处理；适合水或浓度不大于 60% 的乙二醇；主杠与支管无缝连接，杜绝泄漏；采用 360° 旋转放气阀，便于放气管安装；主杠高温回火与保色处理；

1-inch high-quality pipe with one-time forging process; The product includes 1 channel-9 channel(s), and that with more than 10 channels can be combined at will; Caliber: 1 inch, DN25; nominal pressure: PN10; $\Phi 1620$ or $\Phi 1216$ water outlet can be selected at will; Loose joint water outlet is adopted to facilitate pipe cleaning; HPb59-1 brass is adopted with precision forging, and the surface is nickelplated; Suitable for water or ethanediol with concentration not larger than 60%; Main cylinder and branch pipes are seamlessly connected to avoid leakage; 360° rotating vent valve is adopted to facilitate installation of vent valve; The main pipe is processed with high-temperature tempering and color retaining.

德国技术支持
智能混水中心
 Intelligent Water-Mixing Center

- 1 有效防止因高温而产生甲醛苯等有害气体的产生，如果水温过高，家居及木地板直接接触地面，有害气体将会随温度升高而成倍释放，尤其是在冬天一个不通风的环境里，所以要严格控制水温。
- 2 大大延长地暖管的使用寿命（温度高时，地暖管会变软，分水处地暖管易脱管，另外寿命会降低，保用 50 年的前提是水温在 60℃ 以下，如超过 60℃ 发生爆管厂家无责任）
- 3 提高地暖的舒适性，温度可随意人为控制。
- 4 增加流量，促进循环（压力低，温度低的特殊情况下）
- 5 降低流量，节约费用，节能减排（水温高时，只需进部分热水即可，所以可以节约费用，特别是按流量收费的地区，符合绿色低碳理念，利国利民）

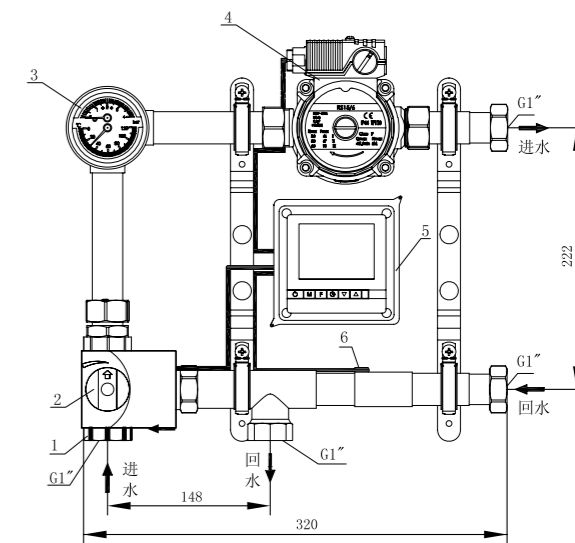
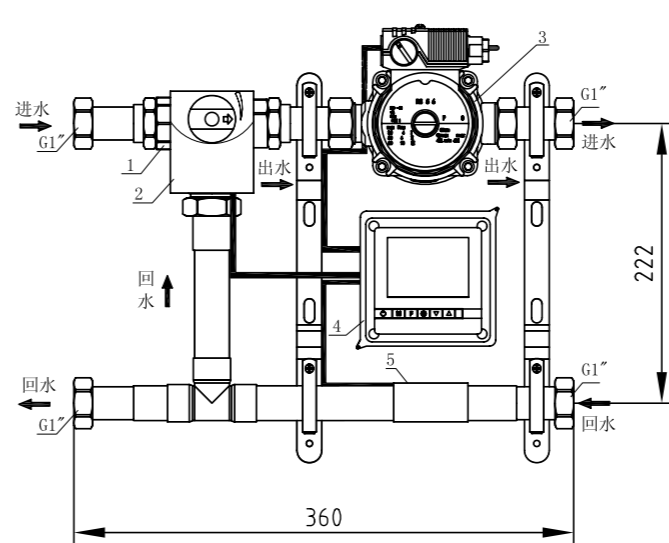
- 1 to prevent the harmful gas such as formaldehyde stupid due to high temperature, if the water temperature is too high, furniture and wooden floor directly contact with the ground, the harmful gas will be released with the temperature increasing exponentially, especially in winter in a ventilation environment, so we will strictly control the water temperature.
- 2 greatly prolong the service life of floor heating pipe (will soften at high temperature, floor heating pipe, manifold in floor heating tube is easy to take off the tube and other life will reduce, the pipe factory warranty for 50 years is the premise of water temperature below 60 °C , such as more than 60 °C tube manufacturer has no liability)
- 3 improve the comfort of floor heating, the temperature can be arbitrarily human control.
- 4 increase traffic, promote circulation (low pressure, low temperature under special circumstances)
- 5 to reduce traffic, saving cost, energy conservation and emissions reduction (only takes into some hot water to the water temperature is high, and so can save cost, especially the region, is paid by the flow in line with the green low carbon concept, reasonably)



左进水原理 F550
 Principle of left water inlet



下进水原理 F570
 Principle of bottom water inlet





PP – R/PB live outside the wire for Angle valve
PP-R/PB 外丝角式活接球阀



On the set of silk inside 2025/1925 multifunctional set of valve
内丝卡套多功能套阀 2025/1925



profiteer
前置过滤器



PP – R/PB silk multi-functional set of valve
PP-R/PB 外丝多功能套阀



The internal wire Angle type card sets of articulated valve
内丝角式卡套活接阀



PP – R Angle type/straight type temperature control valve
PP-R 角式 / 直式温控阀



PP – R/PB silk articulated Angle type ball valve
PP-R/PB 内丝角式活接球阀



PP – R/PB articulated in silk ball valve
PP-R/PB 内丝活接球阀



PP – R/PB articulated in silk ball valve
PP-R/PB 外丝活接球阀



PP – R/PB wire articulated ball valve
PP-R/PB 外丝活接球阀



 德国技术支持
 Sliding Fitting Series
 滑紧式管件系列



 德国技术支持
 Press-Fitting Joint Series
 卡压式管件系列



**专业化的工具配件
使安装变的方便快捷**
Specialized accessories to make installation
convenient and rapid



1. 剪切管材 Shear pipe



2. 插入滑套 Insert slide bushing



3. 扩口 Expand opening



6. 安装完成 Complete installation



4. 插入滑套 Insert slide bushing



5. 滑套 Slide bushing



卡压式工具
Press-Fitting Tool



整圆器
The whole circle device



弯管器
Pipe bend



剪刀
scissors



滑紧式工具
Sliding Tool



管材调直器
Pipe Straightener

满足各种场所安装，经久耐用，免维护、操作简单、价格便宜

Installation in various places can be satisfied, durable, maintenance-free, easily-operated and cheap.



德国技术支持

Temperature Controller Electric Actuator Series 温控器、电热执行器系列

温控器

温控器采用微电脑控制技术，专为采暖设备开发研制，比较室内温度和设定温度的结果，通过继电器控制采暖设备的启停，达到室内恒温节能的目的。

Temperature controller

Temperature controller is specially developed for heating equipment by applying microcomputer control technology, by comparing the result of indoor and given temperature, the opening and closing of heating equipment is controlled by relay, so as to reach the purpose of constant indoor temperature and energy conservation.

电热执行器

执行器是用于集分水器支路阀门、小型阀门、动态平衡阀门的电热执行器，为控制阀门的电驱动部分。可用于小型阀门的开关控制、水采暖系统中的PDM执行控制、中央空调水系统闭合回路阀门的双位控制和稳定控制。执行器在水采暖系统中直接安装与分水器的回水管路或恒温阀门上，当执行器断电，阀门将关闭。

Electrothermal actuator

Electrothermal actuator, the electric drive part to control valve, is applied in branch valve of water distribution-collection device, small valve and dynamic equilibrium valve. The actuator can be used for switch control of small valve, PDM execution control in water heating system, two-position control and stable control of closed loop valve of central air-conditioner water system. It is directly installed on the return line or temperature control valve of water distribution-collection device in water heating system, and when the power of actuator is cut off, the valve will be closed.





好管源于好料
Selected Material



国内实际案例
Domestic Practical Cases



100% 进口原料 绝不添加一粒回收料
100% of imported raw materials Never add a grain of recycled material







本产品由中国人民财产保险公司承保
单次责任事故最高赔偿 **200 万元**

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中国区网址
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