F. I. T.
Industrial Co., Ltd.
冠閤企業股份有限公司

FAITH
INNOVATION
TRUST

GLASS FIBER PLIED YARN

一同探索玻璃纖維的無限可能

冠閤企業股份有限公司
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THINK OUTSIDE THE BOX

CREATE **INFINITE POSSIBILITY**

突 破 框 架 ——→ 開 創 無 限 可 能

ABOUT US
關於冠閤

冠閤企業股份有限公司創立於2003年，以生產玻璃纖維合撚紗起家，爲台灣第一間合撚紗製造商，一直以來秉持著信心(Faith)、創新(Innovation)與信任(Trust)爲經營理念；在2003年底開始將台灣合撚紗外銷全世界，爲了滿足更多廣大客戶的需求，提升公司競爭力，冠閤於2009年通過ISO9001認證並定期更新至今。

在2008年爲拓展業務及產品多樣性，冠閤致力於垂直整合，並成立膜結構部門，結合自家合撚紗技術與PTFE塗布技術的研發成爲台灣唯一生產PTFE建築用布膜的公司。

除了上述玻璃纖維合撚紗，以及PTFE建築用布膜的成品販售之外，冠閤內部亦有業務/設計/布膜加工/鋼構團隊。由業務部門整合客戶需求，經設計團隊進行設計圖規劃以及膜結構分析，布膜加工團隊完成膜材加工、包裝出貨，最後由鋼構團隊現場施工安裝，從無到有一手包辦。

F.I.T. was established in 2003. We started our business with Fiberglass Plied Yarns. We are the first company producing Plied Yarns in Taiwan. With Faith, Innovation and trust as our business philosophy, we have been exporting our products to the world since 2003.

In order to provide better quality and enhance company's competitiveness, F.I.T. contributed in vertical integration and set the fiberglass membrane department and passed ISO9001 certification periodically.

We combine our knowledge in yarns and PTFE coating technique to produce PTFE Coated Fiberglass Membrane.

Start 成立
冠閤企業股份有限公司於2003年成立，爲台灣第一間生產玻璃纖維合撚紗的業者。

F.I.T. was founded in 2003.
The first company produced fiberglass twisted yarn in Taiwan.

2003

2008

Developement 發展
冠閤企業爲了上下整合，結合新技術和產品，成立了膜結構部門，主要服務台灣市場。

F.I.T. developed with new skills and product and got into Tensile Structure market in Taiwan.

2009

Cerification 認證
爲了提供更好的產品和品質服務，在2009年申請和通過ISO 9001認證。

To provide better quality and enhance competitiveness, F.I.T. passed ISO9001 certification periodically since first time in 2009.

2014

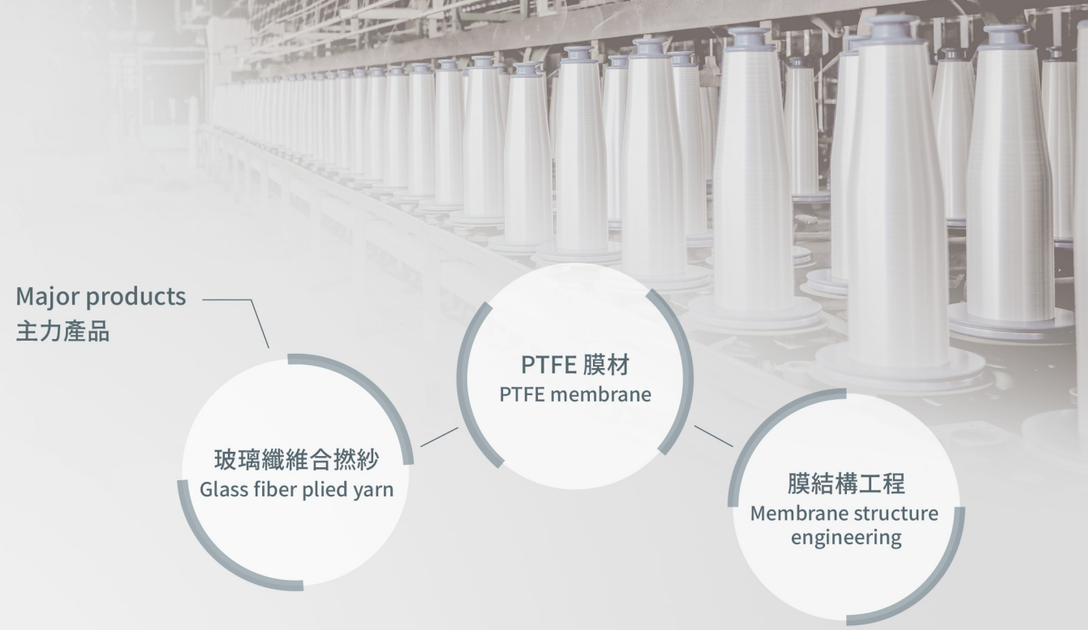
Extand overseas markets 擴展海外市場
成功將公司另外一個產品PTFE布膜打入海外市場，包含德國、新加坡、菲律賓等地區。

We successfully sold our products as PTFE membrane oversea, including Germany, Singapore, Philippines, etc.

2020

New partner 新合作夥伴
成爲Serge Ferrari Group的一員。
Serge Ferrari Group是一間國際且具有指標性的供應商，冀望在與其合作下，更能有效拓展和發掘潛在的市場。

We became one of menber of Serge Ferrari Group, a leading international manufacturer. We all believes that there is a huge potential market for PTFE construction fabrics in the future.



Serge Ferrari 集團設計、開發和製造用於輕質建築和戶外設備應用的創新複合材料。我們的高端解決方案主要針對全球四大戰略市場——遮陽、張拉膜結構、模組化建築、傢俱/遊艇——結合了耐用性、安全性、美觀性、舒適性和可持續性。集團在產品開發和創新方面具有強大的潛力，定期開闢新的建築和設備應用，從日常生活到最壯觀的專案。

Serge Ferrari Group designs, develops and manufactures innovative composite materials for lightweight architecture and outdoor equipment applications. Targeted primarily at four world-wide strategic markets — solar protection, tensile architecture, modular structures, furniture/yachting —, our high-end solutions combine durability, safety, aesthetics, comfort and sustainability. The Group's strong potential for product development and innovation regularly opens up new construction and equipment applications, ranging from everyday life to the most spectacular projects.



GLASS FIBER PLIED YARN
玻璃纖維合撚紗

將兩條以上的玻璃纖維紗，經加撚(Twist)或合撚(Ply)使其成爲一條，就稱爲合撚紗。經合撚後，另外賦予以下優點：

After plying, the outstanding traits mentioned are retained, and the following advantages are provided.

- 更高的耐磨 / 耐折性 Higher abrasion / Folding resistance
- 線徑變化 (提供不同成品外觀)
  Yarn diameter variation (Provide different finished appearance)



Traits of glass fiber yarns 玻璃纖維紗特性

- 電絕緣 Electrical insulation
- 隔熱/保温 Thermal insulation
- 尺寸穩定性 Dimensional stability
- 耐化學性 Chemical resistance
- 高抗拉強度 High tensile strength

Specifications 規格

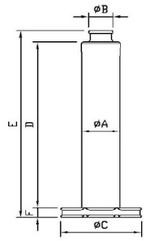
Group 群組	Ply 股數	Twist 撚度
BC150 (EC4 34)	2/4, 4/2, 4/3	3.0S / 3.8S
	2/3	3.4S
	2/4	8.0Z
C1200 (EC4.5 4.2)	1/2	4.4S
D1800 (EC5 2.8)	1/2	4.4S
D900 (EC5 5.5)	1/2	4.4S
D450 (EC5 11)	1/2, 1/3	3.8S / 4.4S
DE150 (EC6 34)	1/2, 1/3	2.8S / 3.3S / 3.8S
	2/3	3.8S
DE75 (EC6 68)	1/2, 1/3, 1/4	3.8S
	2/2, 2/3, 2/4	2.8S / 3.0S / 3.8S
E225 (EC7 22)	1/2, 1/3, 1/4	2.8S / 3.8S / 4.4S
	2/3, 2/5	3.8S / 7.0Z
E110 (EC7 45)	1/0, 1/2	3.5Z, 3.8S
G150 (EC9 34)	1/2, 1/3, 1/5, 1/6	2.8S / 3.8S
	2/3	3.3S
G75 (EC9 68)	1/2, 1/3, 1/4, 1/5, 1/6, 1/20	1.8S / 2.8S / 3.3S / 3.8S /4.4S / 7.0S
	2/2, 3/5, 3/3	2.5S / 5.0S / 6.0S
G37 (EC9 136)	1/2, 1/3, 1/5, 1/6	1.9S / 2.2S / 2.8S / 3.3S / 3.8S / 4.0S
	3/3	3.8Z
H45/50 (EC11 112/100)	1/2, 1/3, 1/4	2.8S / 3.8S
	2/2, 2/3, 2/4	3.8S
K18 (EC13 272)	1/2, 1/3, 1/4	2.8S / 3.8S

- Yarn type 紗線規格：ECBC2250 ～ ECK18 (2.3tex - 272tex)
- Twist 撚度：0.7~8.0TPI (28～400TPM)
- Strand 股數：2~20 Strand
- Product weight 重量：~9Kg
- Special product 特殊產品：BC150 2/3, BC150 4/3, E-glass single yarn, TS-glass yarn, polyester yarn etc.

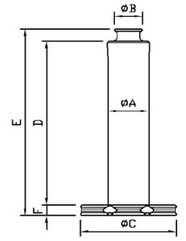
Bobbin code and size 紗管代號和尺寸

Code 代號	A (mm)	B (mm)	C (mm)	D(mm)	E(mm)	F(mm)
#140	60	42	140	321	362	19
#155	60	45	155	296	337	19
#196	70	63.6	196.6	388	435	19
#099 (Two cone)	60	41	99	323	367	18.5

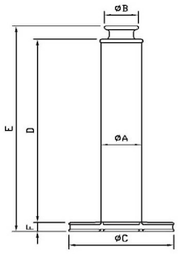
#140



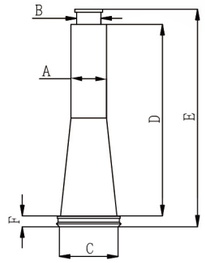
#155



#196



#099



Package of plied yarn 玻纖紗包裝方式

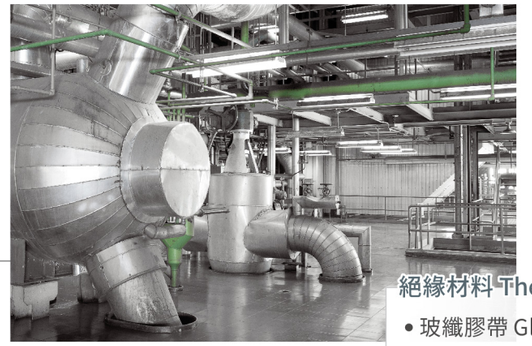
Size 尺寸			L 長 (Cm 公分)	W 寬 (Cm 公分)	H 高 (Cm 公分)
Bobbin code 紗管代號	Layer/Pallet 層數 / 板	Pcs 數量			
#140	2 layers	112	130	110	90
	3 layers	168	130	110	123
#155	2 layers	92	130	110	82
	3 layers	138	130	110	119
#196	2 layers	60	130	110	100
#099 (Two cone)	2 layers	108	120	105	94
	3 layers	162	120	105	134

APPLICATION
產品應用

透過不同的生產，玻纖合撚紗發展出不同的成品應用，如絞邊紗、縫紉紗、耐高溫套管、耐高溫過濾材、輸送皮帶、防切割手套、絕緣膠帶、建築用布膜、建築補強材料、複合材料…等。

Through different production, glass fiber plied yarn can be developed different applications, such as glass fiber leno yarn, fiberglass sewing thread, sleeves, filter bags, conveyor belt, anti-cut gloves, insulating tape, architectural fiberglass membrane, construction reinforcement materials and composite materials etc.

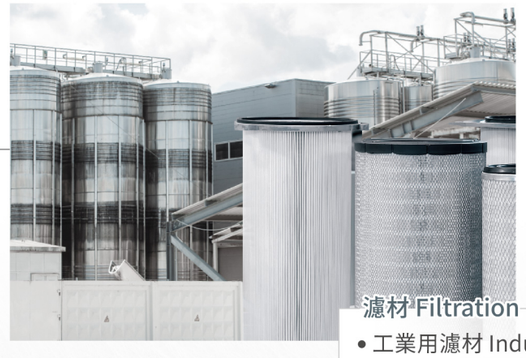
SAFE・BEAUTIFUL
ENERGY SAVING
APPLICATION DIVERSITY



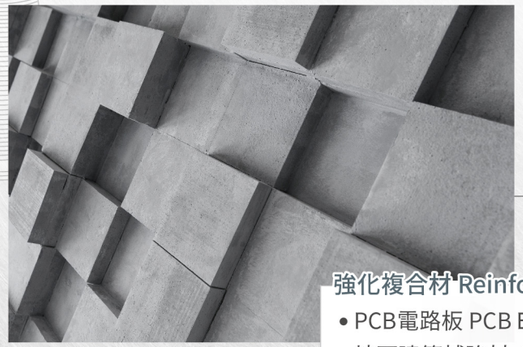
絕緣材料 Thermal insulation
- 玻纖膠帶 Glass fiber tape
- 套管 Sleeves



建築材料 Architectureal material
- 建築用布膜 Architectural fabric



濾材 Filtration
- 工業用濾材 Industrial dust filtration
- 空氣濾材 Air filtration
- 熱氣濾布 Hot gas filtration



強化複合材 Reinforcement & dimensional stability
- PCB電路板 PCB Electronics
- 地面建築補強材 Building industry & geotextiles
- 複合材料 Composites



防火安全材 Fire protection & safety
- 防煙簾 Smoke curtains
- 室內設計和服裝 Interior design & apparel
- 絕緣套管 Protection of pipes & cables



THE FIRST MANUFACTURER OF GLASS FIBER PLIED YARN IN TAIWAN
台灣第一家合撚紗製造商

Advantage and twisting technology 優勢和合撚技術

· 每間原紗廠生產過程，使用漿料不同，儘管規格相同的原紗，物性也會有所不同。因此冠閎與國內外各大原紗廠商保持良好關係，能依據客戶需求挑選出最適合使用之原紗。

· 關鍵的合撚技術，接受玻璃纖維以外的纖維合撚代工，如玻纖混聚酯纖維/金屬纖維等特殊纖維。

· 生產範圍：主要使用無鹼連續玻璃纖維(E-glass)。若有需求，亦有含鹼玻璃(A-glass)或高強度玻璃(S-glass)等其他特殊紗線使用。

· Each single yarn maker has different production processes and different binder used. Therefore, although the single yarn is the same specification, it has different physical properties. In hence, F.I.T. maintains a good relationship with major single yarn manufacturers in Taiwan and abroad. That is the reason why we can select the most suitable industrial fiberglass yarn according to customer demands to produce the best Taiwan fiberglass plied yarn.

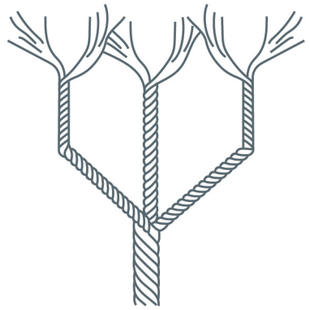
· The key twisting technology, we can process other kinds of yarn, besides glass fiber, such as glass fiber mixed with polyester fiber / metal fiber, Kevlar and other special fibers.。

· Production Range：Usually we use Alkali-Free Continuous Fiberglass (E-Glass). If required, other special yarns such as Alkali glass (A-glass) or high-strength glass (S-glass) are also used.

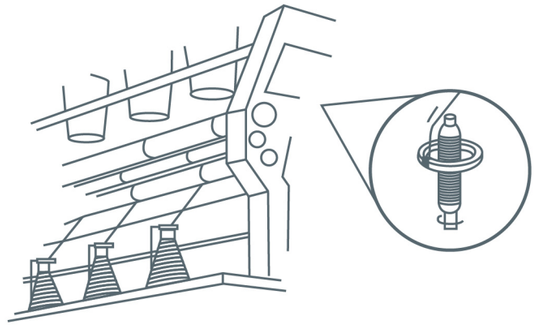
Manufacturing 生產方式

可依照客戶需求，將2條或多條紗線合併成一條紗線，達到增加紗線強度的目的。

Twisting is the process of taking two or more threads and twisting them together to form a stronger thread.



Twisting



Types of ply yarn 紗線類型



· 2股合撚　Two-ply yarns are made by twisting two single yarns.
· 3股合撚　Three-ply yarns are made by twisting three single yarns.
· 4股合撚　Four-ply yarns are made by twisting four single yarns.
· 多股合撚　By twisting two or more ply yarns we can produce.

Certification and affirmation 認證與肯定







