EXTRA CO
COMPOSITES INDIA PRIVATE LIMITED


# E-FIBRO TUBES

**OFFERS MORE THAN 25 YEARS LIFE EXPECTANCY REPLACES UPVC, M.S, HDPE PIPES WITHOUT ADDL. COST**

***LINED WITH TRUST AND REINFORCED WITH PERFECTION***

EXTRA CO
COMPOSITES INDIA PRIVATE LIMITED

# ABOUT OUR COMPANY

Extraco Composites India Pvt Ltd., is a leading manufacturer in fibre glass industry, operating in accordance with the quality standards of ISO 9001:2015. Commitment to quality and customer satisfaction has always ensured successful completion of projects by providing a combination of reliable products and services. Much knowledge has been accumulated during the past two decades, resulting from extensive research, Product testing and providing advanced information on product performance.

The GRP Products & services provided by Extra Co. meet client requirements by providing long - term performance solution to the highest international standards.

E-Fibro tubes are specially made with fibers and resins and are specifically applicable for agro industry and small water & sewerage distribution systems.

# ACCREDITIONS

Extra Co. has obtained the followings accreditations:

- ISO 9001 : 2015 Certified for Quality Management.


EMPOWERING ASSURANCE SYSTEMS

Certificate No : EAS/01Q/121A/0730

Certificate of Registration

This is to Certify that the Quality Management System Of

EXTRACO COMPOSITES INDIA PRIVATE LIMITED

Office:995-P, Diamond Plaza, 2nd Floor,12th Main Road, 2nd Avenue, Anna Nagar, Chennai-600040, Tamil Nadu, India. Factory: Survey No: 13, Tada Village and Mandal - 524401,Nellore District, Andhra Pradesh, India.

Has been successfully assessed and Comply with the following standard

ISO 9001:2015

Scope of Certification

Design, Manufacturing, Erection & Commissioning of Glass Reinforced Fibre Plastic (GRP), Glass Fibre Reinforced Epoxy (GRE), Glass Fibre Reinforced Vinylester (GRV) Pipes & Fittings, GRP/FRP Storage Tanks for Chemical, Fuel & Water and Other GRP/FRP Specialty Products

Initial Issue Date : 22nd May 2019*
Valid From : 22nd May 2023
Valid To : 21st May 2024*

Certificate is valid for Three Years(22nd May 2022 to 21st May 2025) from the date of Initial registration. Upon successful completion of Surveillance audit a new certificate with an extended validity will be issued. This certificate is property of EAS and shall be returned immediately on request.

EAS

JAS-ANZ

www.jas-anz.org/register

IAF

Certifying Authority

1495/1,Mansarovar ,16th Main Road, Anna Nagar,West,Chennai - 600040,Tamil Nadu , India. Ph : +91 4426162670

E-mail : info@eassin.com ,Website : eascertification.com

# QUALITY ASSURANCE POLICY - ISO 9001 : 2015

To build Quality into the processes with Continual Improvement, to the customers standards, for achieving defect free products on time, every time aiming at Total Customer Satisfaction, by involvement of personnel and upgradation of technology with commitment to satisfy applicable legal requirement.

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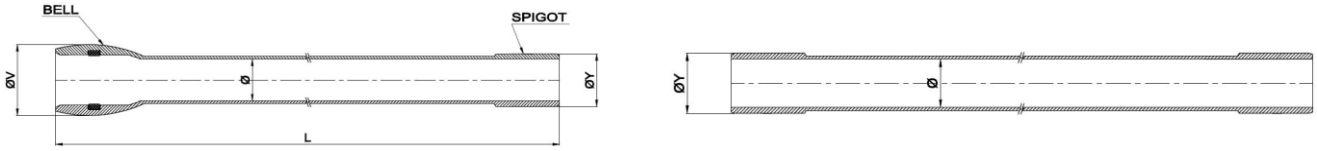
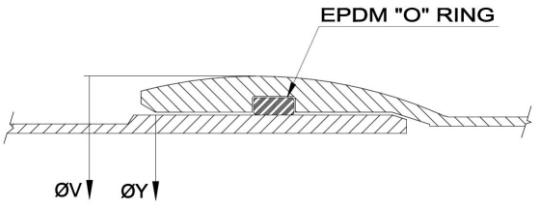
# E-FIBRO TUBES FOR [ AGRI / PRESSURE LINES / SANITARY / DRAINAGE APPLICATIONS ]

## TYPICAL LAYOUT OF PIPE

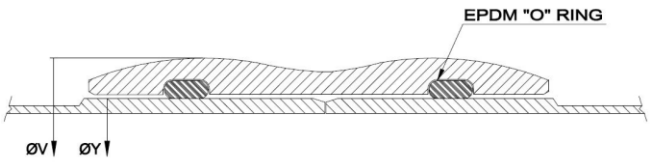



## TYPICAL JOINTING ARRANGEMENT

### Bell & Spigot Joint




### Bell & Spigot Joint




## TECHNICAL DATA

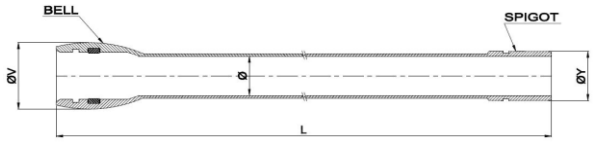
| S. No | Pipe Code | Size ID - Ø | | Pipe length in Mtrs. L | Coupler Type | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFT 80 | 3.14 | 80 | 6 | Double Bell 'O' ring | 88 | 111 |
| 2 | EFT 100 | 4 | 100 | | | 110 | 133 |
| 3 | EFT 125 | 5 | 125 | | | 135 | 158 |
| 4 | EFT 150 | 6 | 150 | | | 161 | 187 |
| 5 | EFT 175 | 7 | 175 | | | 187 | 214 |
| 6 | EFT 200 | 8 | 200 | | | 213 | 242 |
| 7 | EFT 225 | 9 | 225 | | | 239 | 269 |
| 8 | EFT 250 | 10 | 250 | | | 265 | 296 |
| 9 | EFT 275 | 11 | 275 | | | 291 | 317 |
| 10 | EFT 300 | 12 | 300 | | | 317 | 344 |

# APPLICATION

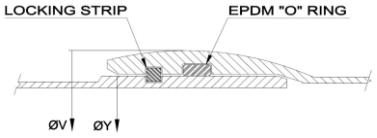
- Agricultural pressure pipes nominal 6 Kg /cm$^2$
- Sanitary
- Small drainage system

# E-FIBRO TUBES FOR [ BORE WELL CASINGS ]

### Typical layout of Pipe




### Typical Jointing Arrangement




## TECHNICAL DATA — UPTO 24 METERS DEPTH

| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTCS 150 | 6 | 150 | 6 | Bell & spigot 'O' ring & Locking strip | 161 | 187 |
| 2 | EFTCS 175 | 7 | 175 | | | 187 | 214 |
| 3 | EFTCS 200 | 8 | 200 | | | 213 | 242 |
| 4 | EFTCS 225 | 9 | 225 | | | 239 | 269 |
| 5 | EFTCS 250 | 10 | 250 | | | 265 | 296 |

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### 25 - 80 METERS DEPTH

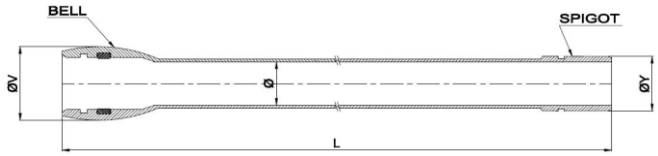
| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTCS 150 | 6 | 150 | 6 | Bell & spigot | 161 | 187 |
| 2 | EFTCS 175 | 7 | 175 | ↓ | 'O' ring & | 187 | 214 |
| 3 | EFTCS 200 | 8 | 200 | ↓ | Locking strip | 213 | 242 |
| 4 | EFTCS 225 | 9 | 225 | ↓ | ↓ | 239 | 269 |
| 5 | EFTCS 250 | 10 | 250 | ↓ | ↓ | 265 | 296 |

### 81 - 250 METERS DEPTH

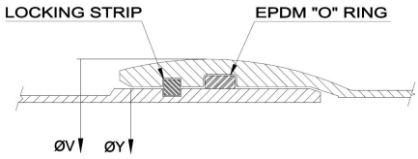
| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTCS 150 | 6 | 150 | 6 | Bell & spigot | 161 | 187 |
| 2 | EFTCS 175 | 7 | 175 | ↓ | 'O' ring & | 187 | 214 |
| 3 | EFTCS 200 | 8 | 200 | ↓ | Locking strip | 213 | 242 |
| 4 | EFTCS 225 | 9 | 225 | ↓ | ↓ | 239 | 269 |
| 5 | EFTCS 250 | 10 | 250 | ↓ | ↓ | 265 | 296 |

# E-FIBRO TUBES FOR
## [ SUBMERSIBLE PUMP DELIVERY PIPE ]

### Typical layout of Pipe




### Typical Jointing Arrangement




### TECHNICAL DATA

### UPTO 24 METERS DEPTH

| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTC 150 | 6 | 150 | 6 | Bell & spigot | 161 | 187 |
| 2 | EFTC 175 | 7 | 175 | ↓ | 'O' ring & | 187 | 214 |
| 3 | EFTC 200 | 8 | 200 | ↓ | Locking strip | 213 | 242 |
| 4 | EFTC 225 | 9 | 225 | ↓ | ↓ | 239 | 269 |
| 5 | EFTC 250 | 10 | 250 | ↓ | ↓ | 265 | 296 |

### 25 - 80 METERS DEPTH

| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTC 150 | 6 | 150 | 6 | Bell & spigot | 161 | 187 |
| 2 | EFTC 175 | 7 | 175 | ↓ | 'O' ring & | 187 | 214 |
| 3 | EFTC 200 | 8 | 200 | ↓ | Locking strip | 213 | 242 |
| 4 | EFTC 225 | 9 | 225 | ↓ | ↓ | 239 | 269 |
| 5 | EFTC 250 | 10 | 250 | ↓ | ↓ | 265 | 296 |

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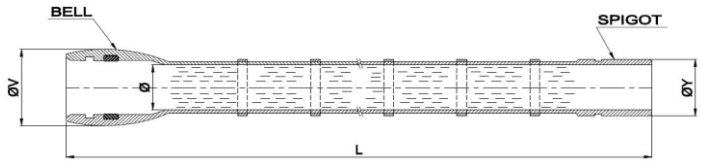
### 81 - 250 METERS DEPTH

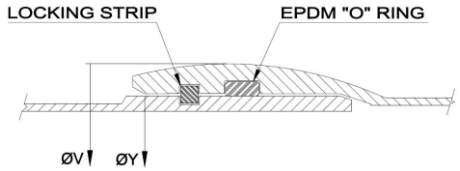
| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTC 150 | 6 | 150 | 6 | Bell & spigot 'O' ring & Locking strip | 161 | 187 |
| 2 | EFTC 175 | 7 | 175 | | | 187 | 214 |
| 3 | EFTC 200 | 8 | 200 | | | 213 | 242 |
| 4 | EFTC 225 | 9 | 225 | | | 239 | 269 |
| 5 | EFTC 250 | 10 | 250 | | | 265 | 296 |

# E-FIBRO TUBES FOR
## [ BORE WELL CASING SCREEN PIPES ]

### Typical layout of Pipe




### Typical Jointing Arrangement




### TECHNICAL DATA

### UPTO 24 METERS DEPTH

| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTSP 80 | 3.14 | 80 | 6 | Bell & spigot 'O' ring & Locking strip | 88 | 111 |
| 2 | EFTSP 100 | 4 | 100 | | | 110 | 133 |
| 3 | EFTSP 125 | 5 | 125 | | | 135 | 158 |
| 4 | EFTSP 150 | 6 | 150 | | | 161 | 187 |

### 25 - 80 METERS DEPTH

| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTSP 80 | 3.14 | 80 | 6 | Bell & spigot 'O' ring & Locking strip | 88 | 111 |
| 2 | EFTSP 100 | 4 | 100 | | | 110 | 133 |
| 3 | EFTSP 125 | 5 | 125 | | | 135 | 158 |
| 4 | EFTSP 150 | 6 | 150 | | | 161 | 187 |

### 81 - 250 METERS DEPTH

| S. No | Pipe Code | Pipe ID - Ø | | Pipe length in Mtrs. | Coupler | Spigot Dimension in mm ØY | Max. outer dia of bell in mm ØV |
|---|---|---|---|---|---|---|---|
| | | Inches | mm | | | | |
| 1 | EFTSP 80 | 3.14 | 80 | 6 | Bell & spigot 'O' ring & Locking strip | 88 | 111 |
| 2 | EFTSP 100 | 4 | 100 | | | 110 | 133 |
| 3 | EFTSP 125 | 5 | 125 | | | 135 | 158 |
| 4 | EFTSP 150 | 6 | 150 | | | 161 | 187 |

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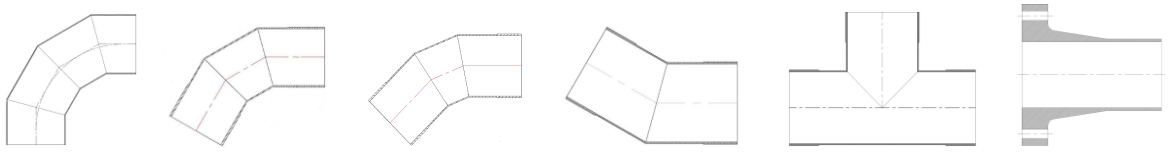
# TECHNICAL DATA & SPECIFICATIONS

| | | |
|---|---|---|
| **Standard Tube lengths** | 6m and less. | |
| **Manufacturing process** | Dual Helical Filament Winding. | |
| **Size of tubes [ID]** | 80,100,125,150,175,200,225,250,275,300mm | |
| **Jointing Arrangement** | a) Double bell spigot coupler with double 'O' ring for horizontal applications. | |
| | b) Bell & spigot with 'O' ring and locking strip for vertical applications. | |
| **Standards Followed** | Generally as per American water works association AWWA C950. | |
| **Pressure class** | Upto 6 bar, higher pressure class optional. | |
| **Temperature** | Upto 70˚C, optional for 100˚C / 180˚C | |
| **Stiffness** | Upto 2500 N/m2 higher stiffness optional. | |
| **Properties** | **Values** | |
| **1. Mechanical Properties** | • Hoop Tensile strength | - 220-490 N/mm2 |
| | • Axial tensile strength | - 40-50 N/mm2 |
| | • Flexural strength | - 170 N/mm2 |
| | • Flexural modulus | - 14-20 KN/mm2 |
| | • Hoop tensile modulus | - 20-30 KN/mm2 |
| | • Axial tensile modulus | - 6-10 KN/mm2 |
| | • Thermal conductivity | - 0.2 -0.35 W/m˚K |
| | • Specific heat | - 921 KJ/Kg˚K |
| **2. Electrical Properties** | • Surface resistivity | - 1013 ohm cm |
| | • Resistivity | - 1015 ohm cm |
| | • Di electric strength | - 30 KV/ mm |
| | • Melting temperature | - 220˚C |
| **3. Chemical Properties** | • Corrosion resistant | |
| | • Temperature resistant | |
| | • Ageing and weather resistant | |
| | • Scratch resistant | |
| | • Flame retardant (optional) | |
| **Colour** | Dull Yellow or other colour optional | |
| **Tests** | Batch testing of | |
| | • Hydrostatic pressure test. | |
| | • Axial tensile strength. | |
| | • Hoop tensile strength. | |
| | • Stiffness. | |
| **Fittings** | Couplers, 90˚, 60˚, 45˚, 30˚ bends, T-sections, Reducers, Flange connectors & Blind flange | |



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## COMPARISON CHART

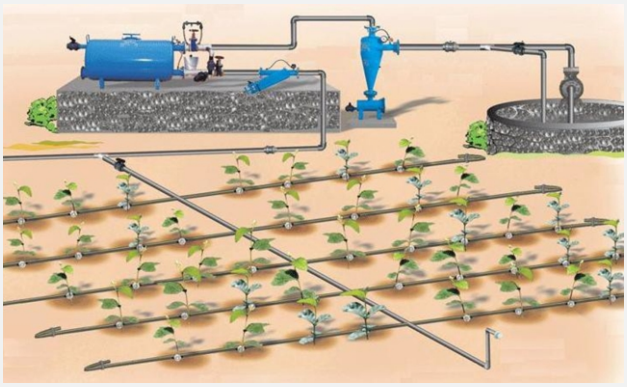
| S.No | Description | GRP Pipes | DI | Epoxy Coated MS | PVC | HDFE |
|---|---|---|---|---|---|---|
| 1 | Corrosion resistant | Good | Moderate with internal mortar lining | External wrapping and Cathodic Protection required | Poor against alkaline medium | Good |
| 2 | Maintenance | No maintenance required | Periodical inspection required | Periodical inspection required | Repair not possible | Repair is not possible |
| 3 | Design Life | 50 years | 25-30 years | 15-25 years | 10-15 years | 15-20 years |
| 4 | Friction factor (Hazen Williams Coefficient "c") | 150 | 120 | 120 | 150 | 150 |
| 5 | Thickness | Optimized by design | Standard dimensions | Standard dimension up to 16" (400 mm) (Above 16" dimension based on Yield Strength) | Standard dimension | Standard dimension |
| 6 | Specific Gravity | 1.8 -1.9 | 7.05 | 7.85 | 1.4-1.45 | 0.95 |
| 7 | Weight | Light in weight | 6 times heavier than FRP | 3-4 times higher than FRP | Weight is higher than FRP due to higher thickness | Weight is higher than FRP due to higher thickness |
| 8 | Diameter | Max. 13ft (4m) | Max. 6 ft (1.80m) | No limitation | Max. 3ft. (900 mm) | Max. 4ft. (1.2m) |
| 9 | Tensile strength | 2200-4900 kg /cm2 | 4200 kg /cm2 | 4000 kg /cm2 | 500 kg /cm2 | 350 kg /cm2 |
| 10 | Modulus of elasticity | $2x10^5$-$3x10^5$ kg /cm2 | 15.5 x 105 kg /cm2 | 21x105 kg /cm2 | 0.35x105 kg /cm2 | 0.5x105 kg /cm2 |
| 11 | Surge pressure | Best to handle among all piping materials | Surge pressure high protection device needed | Surge pressure high protection device needed | Cannot handle surge pressure very well | Cannot handle surge pressure very well |
| 12 | Length | Max.20 ft. (6m) | Max.16ft (5m) | Limited to 20' -40' (6-12m due to weight) | Max. 40 ft. (12 m) | No limitation |
| 13 | Diameter specified | ID | OD | OD | OD | OD |
| 14 | Cost | On par with PVC | Costliest | Costlier | Cheaper | Costlier than PVC |

## THE ADVANTAGES OF E-FIBRO TUBES

- Non corrosive, can be used for salt water application.
- Long life more than 25 years.
- Non conductive material as insulator.
- High specific strength.
- Low weight 1/4 th of steel for easy handling.
- Greater dimensional stability.
- E-fibro tubes are flexible hence accept vibrations & tremors and can work at low temperature.

## APPLICATION

- Agricultural water distribution network.
- Bore well casing pipes.
- Bore well submersible pump delivery.
- Small water & sewerage distribution network of villages and small towns.



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## GET IN TOUCH


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