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GhafDrip The Art of Watering

At Eplast Industries, our mission is to provide world-class, sustainable piping solutions that empower communities, promote water conservation, and contribute to a greener, more resilient future for generations to come.

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GhafDrip[®] – The Art of Watering

Proudly Made in the UAE

GhafDrip is proudly developed by Eplast Industries, a sister company of Hürner Schweisstechnik Gulf LLC. With decades of experience and a legacy of innovation, we have been delivering world-class engineering solutions across the GCC's infrastructure sector. Now, through GhafDrip, we extend this expertise to the landscaping and agricultural sectors, offering advanced irrigation technologies tailored to the region's specific needs.

What Sets Us Apart

- > UAE's First inline Cylindrical PC and NON-PC Emitter Dripline Manufacturer
- > Locally Engineered for regional climate and soil conditions
- > Support UAE's Vision for water conservation and sustainability

Our Vision

GhafDrip's inline drip irrigation system was born to fill a critical gap in the UAE market the lack of locally manufactured inline Pressure Compensating (PC) dripline. Aligned with the nation's growing emphasis on water conservation and environmental sustainability, GhafDrip is proud to support the UAE's vision for a greener, more water-efficient future.

More than Drip Irrigation

Eplast Industries also manufactures HDPE pipes (16mm to 250mm) for water and gas applications contributing to sustainable infrastructure development across the region.













Why GhafDrip®?

Our state-of-the-art drip irrigation solutions are meticulously engineered to empower landscapers, farmers, and horticulturists with reliable, high-performance systems that promote sustainable growth and long-term productivity. As the UAE's leading manufacturer of inline PC and Non-PC cylindrical emitter dripline, we take pride in delivering premium, Made in UAE solutions built to meet the region's unique challenges.

Premium Quality and Durability:

Crafted from high-quality 100% Virgin Polyethylene (PE) material, GhafDrip driplines are designed as per ISO 9261 and ISO 8779 to withstand harsh weather conditions, including intense UV exposure, ensuring long-lasting performance.

Tested and Certified Excellence:

GhafDrip emitters are **pressure and flow tested** by the **Fresno State Center of Irrigation Technology, California**, a globally recognized authority in irrigation system performance. Additionally, **Eplast Industries** is an **ISO-certified company**, ensuring that all products meet stringent international quality standards

Water Efficiency and Sustainability:

With precise water delivery and reduced wastage, GhafDrip driplines are engineered to save up to 70% more water than traditional irrigation methods. This makes them an essential tool for sustainable agricultural practices in arid regions.

Easy Installation:

Driplines are easy to install thanks to their flexible design and durable polyethylene construction, which ensures a secure, leak-resistant connection to fittings.

Improved Plant Health:

Provides consistent moisture directly to the roots, preventing overwatering or underwatering.





How Does Drip Irrigation Work?

Drip irrigation is a cutting-edge irrigation technique that delivers water directly to the root zone of plants, optimizing water usage and promoting healthier plant growth. Here's how this efficient system works:

Water Source:

Water is drawn from a reservoir, tank, or mainline supply, ensuring a steady and reliable source for irrigation.

Filtration System:

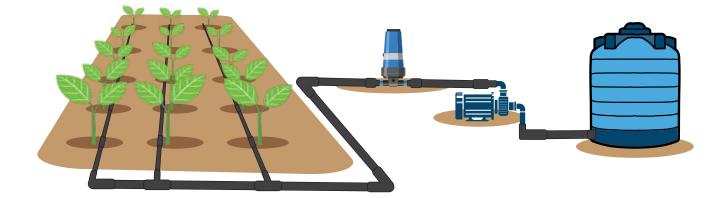
High-quality filters remove impurities and debris from the water, preventing clogging and ensuring a smooth operation of the system.

Mainline and Subline Pipes:

Water is transported through durable main and subline pipes to the desired irrigation zones.

Drip Emitters:

Precision-engineered GhafDrip inline emitters release controlled amounts of water directly to the soil, ensuring targeted hydration to the plants' roots.









State-of-the-Art Manufacturing Excellence

At Eplast Industries, we take pride in manufacturing GhafDrip driplines on our state-of-the-art fully automated extrusion lines, designed for precision, consistency, and efficiency.

Our advanced production setup includes:

Our extrusion lines are equipped with integrated dripper insertion machines to ensure precise and consistent emitter placement.

A servo-controlled perforation system with integrated visual inspection to ensure accurate and defect-free hole punching.

We use 100% virgin, high-quality raw materials, carefully sourced from the region's most reputable suppliers, to manufacture driplines that fully comply with **ISO 9261** and **ISO 8779** standards.

This modern technology enables us to deliver:

- > Exceptional dimensional accuracy.
- > Reliable performance under extreme environmental conditions.
- > Precise emitter integration for uniform flow and pressure regulation.

Our commitment to innovation, and quality assurance positions GhafDrip as a market leader in reliable and sustainable drip irrigation solutions.













Commitment to Quality

At Eplast Industries, quality is at the heart of everything we do, As an ISO 9001 and ISO 14001 certified company, we are dedicated to delivering products that meet the highest standards of performance, reliability, and environmental sustainability.

To ensure our products consistently exceed international standards and meet the specific demands of the UAE's climate, we have established a state-of-the-art in-house laboratory equipped with advanced testing technology. Our comprehensive quality assurance process includes:

Melt Flow Index (MFI) Testing:

All raw materials undergo MFI testing to confirm their flow characteristics, ensuring optimal processing conditions and consistent product performance.

Flow and Pressure Testing:

Each GhafDrip irrigation pipe is subjected to rigorous flow and pressure testing in compliance with **ISO 9261** and **ISO 8779**. This ensures precise emitter performance, uniform water distribution, and maximum water-use efficiency.

UV Resistance Testing:

Given the extreme heat and intense sunlight of the Gulf region, all products are tested for UV resistance to ensure long-term durability, efficiency, and structural integrity.

By adhering to these stringent in-house quality protocols, GhafDrip guarantees superior performance, reliability, and longevity in every product we deliver.











Applications

Landscaping

Achieve up to 70% water savings in parks, public spaces, and commercial landscapes through consistent, low maintenance drip irrigation supporting long term sustainability and reduced operational costs.

Agriculture

Increase crop yields and resource efficiency through precise, pressure compensated water delivery ideal for arid climates and large-scale farming operations.

Horticulture

Ensure reliable irrigation for nurseries and ornamental plant production with uniform emitter performance and superior clog resistance.

Greenhouses

Maintain ideal growing conditions with controlled, evenly distributed irrigation perfectly suited for climate sensitive, high-value crops.







GhafDrip Inline PC & NON-PC Dripline



Cylindrical PC Emitter

Cylindrical Non PC Emitter





Product Range

GhafDrip[®] Pressure-Compensating(PC) Emitter

GhafDrip's Pressure Compensating (PC) emitters feature a durable silicone membrane that ensures precise and uniform water distribution across a wide pressure range. Engineered for precision irrigation, GhafDrip PC emitters are ideal for challenging environments, including hard, rocky terrain and sloped landscapes.

The **GhafDrip PC emitter** features a robust design without holes or cutouts for housing the silicon membrane. This ensures perfect symmetry, enhancing both insertion precision and drilling efficiency.

Drain (D), Non-Drain (ND) and Anti- Siphon (AS) Options

The **Non-Drain system** keeps the dripline full between irrigation cycles, ensuring immediate, uniform watering and improving pulse irrigation efficiency. It opens at **0.30 bar** and closes at **0.18 bar**, eliminating drainage and refill effects.

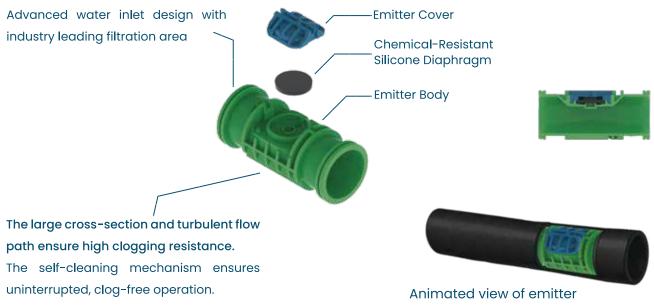
The **Anti-Siphon (AS) system** prevents dirt suction into the emitter, allowing GhafDrip PC (AS) system to be used underground while maintaining performance and durability.







GhafDrip® PC Emitter Design Characteristics



inside the GhafDrip inline PC dripline

GhafDrip® PC Emitter Specifications

Flow Rate I/h	Constant K(bar)	Coefficient of Variation CV(%)	Water Passage Width x Depth x Length (mm)	Filtration Area (mm²)	Recommended Filtration (micron)
2.0	2.0	3.1	1.10 x 1.20 x 62.7	14.00	120/130
4.0	3.8	2.5	1.30 x 1.20 x 51.9	14.00	120/130
Pressure Range : 0.5-4.0 bar		essure Range : 0.5-4.0 bar Opening Pressure : 0.30 bar Closing Pressure :		sure : 0.18 bar	

Why GhafDrip® Cylindrical PC Emitters are the Superior Choice for Landscaping & Irrigation

High clog resistance

Landscaping water sources often come from treated greywater or low-quality sources – cylindrical emitters have larger filter inlets and better self-cleaning capability.

Excellent pressure compensation

Landscaped areas often have elevation changes (slopes, terraces). Cylindrical PC emitters ensure uniform flow regardless of pressure variations.

Precision

Landscaped beds, shrubs, and trees need targeted, consistent watering. Cylindrical emitters maintain precise flow rates over time.

Flow path design

Cylindrical emitters have deep, turbulent labyrinths, reducing clogging and ensuring reliability over time.







GhafDrip[®] Inline PC Dripline

Produced in compliance with ISO 9261 and ISO 8779

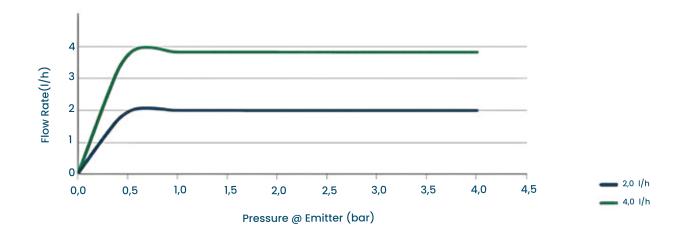
Emitter Type	: Cylindrical PC
Pipe Color	: Black
Outlet	: Standard 2 Holes
Outer Ø	: 16mm – 20mm
Internal Ø	: 13.8mm - 14mm - 17.6mm



ltem Code	Outer Ø	Wall Thickness	Internal Ø	Maximum Operating Pressure	Roll Length	Flow Rate	Spacing Between Emitters
	mm	mm	mm	bar	m	l/h	cm
GD-PC-16-100-2L30-400	16	1.0	14	4	400	2	30
GD-PC-16-100-2L50-400	16	1.0	14	4	400	2	50
GD-PC-16-100-4L30-400	16	1.0	14	4	400	4	30
GD-PC-16-100-4L50-400	16	1.0	14	4	400	4	50
GD-PC-16-101-2L30-400	16	1.1	13.8	4	400	2	30
GD-PC-16-101-2L50-400	16	1.1	13.8	4	400	2	50
GD-PC-16-101-4L30-400	16	1.1	13.8	4	400	4	30
GD-PC-16-101-4L50-400	16	1.1	13.8	4	400	4	50
GD-PC-16-101-2L3070-400	16	1.1	13.8	4	400	2	30-70
GD-PC-16-101-2L3070-400	16	1.1	13.8	4	400	4	30-70

> Short coils, customized wall thickness and spacing between Emitters are available upon request.

GhafDrip® PC Emitter Flow Rate Graph









GhafDrip[®] Inline Non-PC Dripline

GhafDrip inline non-PC dripline designed for efficient irrigation in flat terrain and short-run applications. Made from durable, UV-resistant materials, it features a simple emitter structure without pressure regulation, allowing flow to vary with changes in pressure or elevation. Ideal for **agriculture**, **landscaping**, **and greenhouse irrigation**, **GhafDrip inline non-PC dripline** provides a reliable and cost-effective solution where pressure compensation system is not required

GhafDrip[®] Inline Non-PC Dripline

Produced in compliance with ISO 9261 and ISO 8779

Emitter Type	: Cylindrical Non-PC	
Available Flow Rate	: 2, 4 and 8 l/h	
Pipe Color	: Black	
Outer Ø	: 16mm - 20mm	
Available Wall Thicknesse	s: 0.80, 0.90, 1.00, 1.20, 1.40 🛛 🖉	1
Roll Length	: 100 meters, 400 meters	



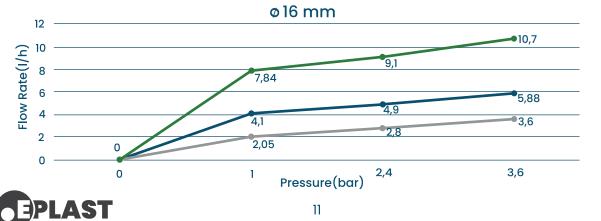
ltem Code	Outer Ø mm	Wall Thickness mm	Internal Ø mm	Maximum Operating Pressure bar	Roll Length m	Nominal Flow Rate I/h	Spacing Between Emitters cm
GD-NPC-16-100-8L20-400	16	1.0	14	4	400	8	20
GD-NPC-16-100-8L40-400	16	1.0	14	4	400	8	40
GD-NPC-16-100-8L50-400	16	1.0	14	4	400	8	50

> Short coils, customized wall thickness and spacing between Emitters are available upon request.

GhafDrip® Non-PC Emitter Specifications

Product	Test Pressure	Avg. Flowrate	cv	Constant(k bar)	Exponent(x)
16 mm 2 l/h	1 bar	2.05	3.039	1.215	0.30
16mm 4 I/h	1 bar	4.10	2.073	1.389	0.45
16mm 8 l/h	1 bar	7.84	1.971	4.69	0.26

GhafDrip[®] Non-PC Emitter Flow Rate Graph









GhafDrip® Lateral Length Guidelines

The following tables presents design recommendations for GhafDrip Inline PC and Non-PC drip irrigation laterals, in accordance with ISO 9261 standards.

GhafDrip 16mm- 2 l/h inline PC Dripline			GhafDrip 16mm- 4 l/h inline PC Dripline			
Inlet Pressure		between tters	Inlet Pressure	Spacing between Emitters		
(bar)	30 (cm)	50 (cm)	(bar)	30 (cm)	50 (cm)	
	Max Latera	Length (m)		Max Lateral Length (m		
1.5	72	120	1.5	50	85	
2.5	108	150	2.5	70	110	
3.5	120	173	3.5	80	125	
4.0	130	182	4.0	85	130	

Design Notes:

- > For landscaping applications, higher inlet pressures (2.5, 3.5, or 4.0 bar) are recommended to ensure better uniformity across multiple lateral branches.
- Recommended lengths are based on clean water conditions, proper filtration as per ISO 9261 standards, and minimal risk of emitter clogging. In cases of poor filtration or sloping terrain, reduce lateral lengths by 10–20%.
- > Designed for flat terrain, with closed-end laterals and flush valves for optimal system performance.
- > Lateral length limits are based on acceptable pressure loss to maintain uniform water distribution:
 - PC emitters: Allow up to 20% pressure loss due to internal flow regulation.
 - Non-PC emitters: Limited to 10% pressure loss to keep flow variation within ±10%, in line with ISO 9261 guidelines.







A states



GhafDrip® PE Pipes

GhafDrip™ Pipes, developed and manufactured by **EPLAST Industries**, represent the next generation of high-quality lateral pipes for **drip and micro-irrigation systems**. Made using premium virgin **PE materials**, these mono-layer pipes are **UV-stabilized**, weather-resistant, and tailored for efficient, long-lasting performance in **agriculture**, **landscaping**, **horticulture**, and **garden irrigation**.

GhafDrip® PE Pipes Specifications

Produced in compliance with ISO 9261 and ISO 8779

Size Range OD: 16 mm, 20 mm, 25 mm, and 32 mm

Wall Thickness: 0.90, 1.00, 1.20, 1.40 mm (other thicknesses available on request)

Working Pressure :

HDPE: Up to 10 bar (recommended 6-10 bar)

PE: Up to 6 bar (recommended 2-4 bar)

100% Virgin PE – no recycled material used

UV Stabilized for superior outdoor durability



Item Code	Pipe Ø mm	Wall Thickness mm	Material	Recomended Working Pressure bar	Roll Length m
GD-16HDP-16100-200	16	1.0	HDPE	10	200
GD-20HDP-20120-100	20	1.2	HDPE	10	100
GD-16PE-16090-200	16	0.9	PE	5	200
GD-20PE-20090-100	20	0.9	PE	5	100

> Short coils, customized wall thickness are available upon request.







EPLAST High Density Polyethlene PE 100 Pipes

Our HDPE Pipes are produced using 100% virgin PE100 resin, EPLAST HDPE pipes offer exceptional mechanical strength, and durability. Designed specifically for irrigation applications, our pipes are available in SDR11 (PN16) and SDR17 (PN10) from 16mm to 32mm, making them ideal for use as mainlines and sub-mainlines in drip irrigation and landscape systems.

While EPLAST offers HDPE piping solutions up to 250mm under its core range, this selection is curated to support efficient, reliable water distribution within GhafDrip systems.

EPLAST HDPE Pipes Specifications

Pressure Ratings: SDR11 (PN16), SDR17 (PN10)

Standards Conformity: ISO 4427, ISO 15494

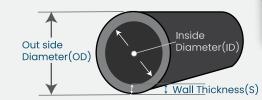
Applications: Suitable for the transportation of pressured

water, gas supply, irrigation systems, and firefighting networks.

Material: 100% virgin PE100

Features: UV resistant, corrosion-free, durable, flexible

Colour: Black with Blue Stripes



Item Code	Pipe ø (OD) mm	Wall Thickness (S)mm	Pipe(ID) mm	Roll Length m
EL-17-16-100	16	1.6	12.8	100
EL -11-16-100	16	2.0	12.0	100
EL-17-20-100	20	1.6	16.8	100
EL-11-20-100	20	2.3	15.4	100
EL-17-25-100	25	1.90	21.2	100
EL-11-25-100	25	2.3	20.4	100
EL-17-32-100	32	2.4	27.2	100
EL-11-32-100	32	3.0	26.0	100

> Short coils, customized wall thickness are available upon request.







Flow Velocity, Flow Rate & Head Loss for HDPE Pipes (20mm, 25mm, 32mm)

When designing PE100 HDPE piping systems, flow velocity and pressure loss depend on both the application and pipe durability. The following values are calculated for clean water at 20°C.

Recommended Flow Velocity by Application:

Drip / Irrigation (low pressure)	: 0.6 – 1.5 m/s
General Plumbing / Water Supply	: 1.0 – 2.0 m/s
High-Pressure Industrial Systems	: 2.0 – 3.0 m/s (Max: 5.0 m/s for short-term use)

To ensure system longevity and avoid pressure surges, continuous flow velocity should be kept below 3.0 m/s in high-pressure systems.

The following table shows maximum flow rates and head loss for PE100 HDPE pipes of 20mm, 25mm, and 32mm outer diameter at SDR 9, 11, and 17:

OD (mm)	SDR	ID (mm)	Flow @2.5 m/s (L/s)	Flow @3.0 m/s (L/s)	Head Loss @2.5 m/s (m/100m)	Head Loss @3.0 m/s (m/100m)
20	9	15.56	0.475	0.57	16.08	22.54
20	11	16.36	0.526	0.631	15.16	21.25
20	17	17.65	0.611	0.734	13.88	19.46
25	9	19.44	0.742	0.891	12.4	17.38
25	11	20.45	0.822	0.986	11.69	16.38
25	17	22.06	0.955	1.147	10.7	14.99
32	9	24.89	1.216	1.46	9.29	13.03
32	11	26.18	1.346	1.615	8.76	12.28
32	17	28.24	1.565	1.878	8.02	11.24





GhafDrip Online PC Emitter & Fittings



GhafDrip® Online PC Emitter

The Most Versatile & Easy-to-Install GhafDrip online (PC) Pressure Compensating Emitter Ideal for a wide range of applications, this high-performance emitter incorporates with a silicone membrane which ensures consistent water flow even under varying pressure conditions. Its user-friendly design allows for quick, hassle-free installation—perfect for drip irrigation, greenhouses, and landscaping projects.



GhafDrip® Online PC Emitter Characteristics

- > Wide range of flow rates 2 / 4 / 8 and 24 I/h.
- > Availability of Drain and Non-Drain Emiters.
- > GhafDrip Online PC emitter is designed for installation on pipes from 16 mm up to 32 mm diameter and wall thickness from 0,9 mm up to 1,2 mm. Wide pressure compensation range.
- > Continuous self-cleaning mechanism ensures non-clogging uninterrupted emitter operation.
- > High UV resistance. Resistant to standard nutrients used in agriculture.
- > Very low Coefficient of Variation (CV), less than 5%.
- > GhafDrip PC emitters can be installed manually exactly where they are required. The number of emitters can be increased in order to increase water supply aimed at meeting Plants and trees growth rate requirements.

Perfect for Any Application:

- Home Gardens & Landscaping Keep lawns lush, flower beds vibrant, and hedges evenly watered.
- > Commercial Agriculture Achieve consistent yields with reliable drip irrigation.
- > Hydroponics & Greenhouses Maintain perfect moisture levels for soilless growing.
- > Public Parks & Urban Landscaping Efficiently maintain green spaces with minimal water use.







GhafDrip® Online PC Emitter Design

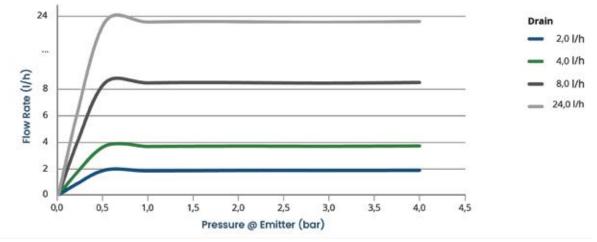
The online PC emitters have been tested and certified by both CIT and Irstea institutes, earning top rankings for coefficient of variation (CV), emission uniformity, flow accuracy, and clogging resistance.



			•			
Normal Flow rate (I/h)	Constant k(bar) Drain	Constant k(bar) No Drain	Coefficient of Variation CV(%)	Water Passage Width x Depth x Length(mm)	Filtration Area (mm²)	Recommended Filtration (mesh/micron)
2.0	2.0	2.1	2.0	1.00 x 1.00 x 55.4	3.80	120/130
4.0	3.8	4.2	2.0	1.30x 1.10 x 50.6	3.80	120/130
8.0	8.4	9.0	2.2	1.50 x 1.15 x 46.5	3.80	120/130
24.0	23.5	23.5	2.3	1.35 x 1.20 x 35.0	3.80	120/130
Pressure range : 0.5 - 4.0 bar		Opening pressure : 0.30 bar		Closing pressure : 0.20 bar	24 I/h emitter available with cap	

GhafDrip® Online PC Emitter Specifications

GhafDrip® Online PC Emitter Flow Rate Graph





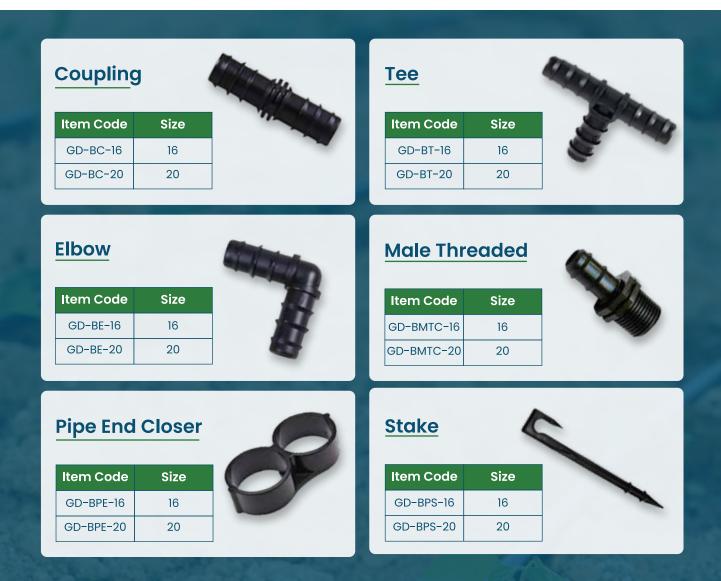




GhafDrip® Barbed Fittings for Drip Irrigation Systems

GhafDrip barbed fittings offer a simple, reliable, and cost-effective solution for connecting both Pressure Compensating (PC) and Non-Pressure Compensating (Non-PC) pipes in drip irrigation systems. Featuring ridged barbs, these fittings securely grip the pipe to create a tight, leak-resistant seal—no glue or special tools required. Hose clamps may be added for extra security in higher-pressure systems.

Manufactured from tough, UV-resistant polypropylene (PP), GhafDrip fittings are built to with stand outdoor conditions and deliver long-term performance in various irrigation setups.



Key Features & Benefits

- > Cost-Effective More affordable than compression fittings, yet highly dependable.
- > Lightweight & Flexible Ideal for both permanent and temporary systems, and easily reconfigurable.
- > Hassle-Free Quick to install and adjust without requiring specialized tools or equipment.







GhafDrip[®] Compression Fittings for Drip Irrigation Systems

GhafDrip Compression fittings provide secure, leak-proof connections for drip irrigation pipes ensuring efficient water delivery. Made from durable UV-stabilized plastic, these fittings resist cracking and degradation from prolonged sun exposure. Ideal for both flat and sloped terrains.



Key Features & Benefits

- High-Quality Material UV inhibited ABS plastic ensures long term durability in outdoor conditions.
- > Compression Design Barbed interior grips tubing tightly, creating a watertight seal without clamps or glue
- > Easy Installation Simply push the tubing into the fitting; no special tools required.
- Versatile Use Suitable for drip lines, mainlines, and lateral tubing in gardens, farms, and landscapes.







Our Group of Excellence

At EPLAST Industries, we are proud to be part of a forward-thinking group driving innovation in water, Gas, and irrigation infrastructure networks across the GCC. Powered by decades of experience and the trusted expertise of our sister company, HÜRNER Schweisstechnik Gulf LLC, we deliver smart, high-performance solutions backed by world-class German and Italian engineering.

Sister Company – HÜRNER SCHWEISSTECHNIK GULF LLC

Headquartered in Dubai, UAE, HÜRNER Gulf proudly represents HÜRNER Germany — a global leader in plastic welding technology. Since 2009, we have been serving the Gulf's water and gas infrastructure sectors with precision, reliability, and cutting-edge innovation.

Strategic Partnership with NUPI Industrie Italiane (Italy)

Since 2010, HÜRNER Gulf partnership with NUPI has brought advanced HDPE Butt Fusion and Electrofusion fittings to the GCC, supporting critical infrastructure, utility, and irrigation networks with trusted Italian engineering and uncompromising quality.

Key Products:



Bringing Innovation, Together :

Whether you're building efficient Water, Gas and irrigation systems with GhafDrip or EPLAST Pipes, installing infrastructure with HÜRNER welding machines, or connecting pipelines with ELOFIT and Elopress, our group delivers seamless integration, technical excellence, and long-term reliability.

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