

Jain Turbo Cascade®

PC, PCAS & PCNL



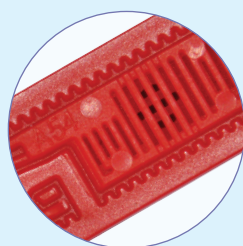
Integral, Flat, Pressure Compensating Dripline

Available in three options, Basic Pressure Compensating, Orange, Pressure Compensating Anti-Siphon, Blue, Pressure Compensating Non-Leakage, Red



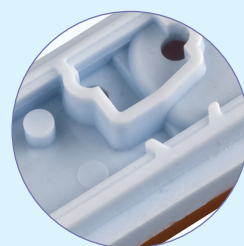
Innovative Cascade Labyrinth

Cascade labyrinth gives strong, self cleaning turbulence. Hydrodynamic dripper design ensures continuous flushing of sediments.



Innovative Fine Inlet Filter

Innovative fine inlet structure to improve clog resistance.



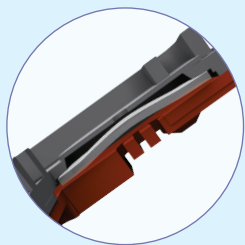
Protection from Root Intrusion and Sand Suction

Weir outlet structure separates regulating outlet from tubing outlet which prevents root intrusion and sand suction.



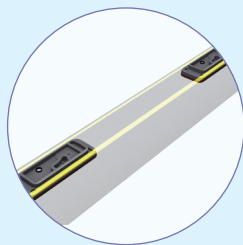
Precision Pressure Compensation

Injection moulded silicone diaphragm ensures precision in pressure compensation helps to maintain high discharge uniformity.



Dynamic Self Cleaning Mechanism

Dynamic movement of diaphragm flushes of debris.



Manufactured with Most Modern, State-Of-the-Art Equipment.

It's computerised continuous online quality control monitors emitter spacing and precision in outlet drilling. Thus ensures reliable quality and consistent performance.



Marked with Two Parallel White Stripes 'Twin-Line'®

Our copyright marking of two parallel yellow line 'Twin Line'® assures a best quality product.

Jain Turbo Cascade® PC,PCAS & PCNL

Additional Features

Quality Comes First - Each batch is tested for stringent quality parameter. Conforming to Indian standard IS 13488:2008 and international standard ISO 9261:2004.

Manufactured from Special Grade Virgin Plastic

Material - Makes the tubing durable and gives best environmental stress crack resistance (ESCR).

Excellent CVM, manufacturer's coefficient of variation

- Maintains close dimensional tolerances to ensure best field emission uniformity.

Rodent Deterrent option - Can also be supplied with optional rodent deterrent feature which protects tube from rats.

Applications

- All purpose versatile product. Suitable for undulating areas.
- Open field application to maintain high field application efficiency.
- PCNL option allows all the drippers to open at a time. Hence it is specially recommended for pulse irrigation for greenhouse/nurseries especially for soilless substrate application.
- PCNL option reduces filling time, saves water and electricity needed to fill up large pipe volume.
- PCAS is recommended for subsurface application to prevent soil suction.
- Large fields with long rows.

Specifications

- **Nominal Discharges** : Available in 1.1, 1.6, 2.0, 2.2 and 3.8 lph
- **Sizes** : Standard sizes of 16, 17, 18, 20, 22 and 23 mm nominal diameter. Other sizes can be supplied on demand.
- **Emitter Spacing** : Standard emitter spacing of 15, 20, 30, 40, 50, 60, 75, 90, 100, 120 and 150 cm. Any other emitter spacing and group spacing can be supplied on demand.
- **Pressure Compensating Range**
PC and PCAS model - 0.5-4.0 kg/cm² (7.11-56.88 psi)
PCNL model - 1.0 - 4.0 kg/cm² (14.22-56.88 psi)
- **Opening and Closing Pressure for PCNL Model**
Opening pressure - 1.0 kg/cm² (14.22 psi),
Closing pressure - 0.25 kg/cm² (3.56 psi).

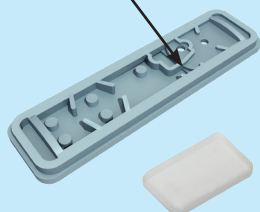
Operating Specifications

- Recommended to use specially designed emitting pipe fittings.
- While using PCNL model, make sure that static pressure at the dripper shall not be more than closing pressure i.e. 0.25 kg/cm².
- Shall be used with "Lateral Leakage Prevention Device (LLPD)" for static head more than closing pressure.
- Always keep the dripper in upright position for better clog resistance.
- Filtration recommendation 100 micron or less. Actual quality of filtration can be decided by quality of source water. Please refer to our "Maintenance Manual" for further details.

Jain Turbo Cascade PC®

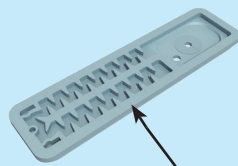
Upper View

Weir structure against root intrusion and sand suction



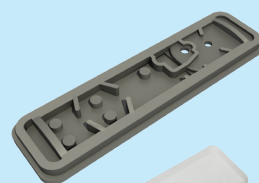
Bottom View

Cascade labyrinth, wide water passage and strong self-cleaning operation



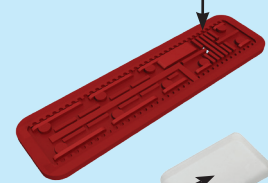
Jain Turbo Cascade PCNL®

Upper View



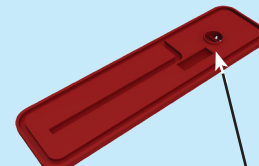
Bottom View

Filter with side water inlets



Double purpose large diaphragm

Non-drainage and anti-siphon



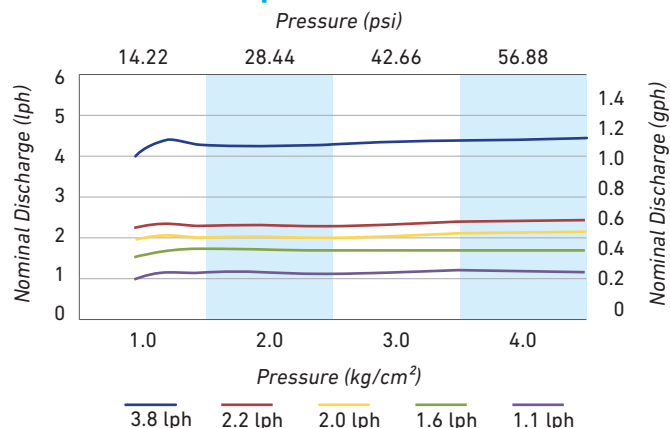
Jain Turbo Cascade® PC,PCAS & PCNL

Technical Specifications - Tubing

Nominal Dia (mm)	Inside Dia (mm)	Minimum Wall Thickness (mm)			Standard Coil Length (m)
		Class-1	Class-2	Class-3	
*16	14.2	0.5	0.7	1.0	100, 250, 400
*20	18.0	0.7	0.9	1.2	100, 250

* Dimensions are as per Indian Standard IS 13488:2008.

Performance Graph



Note: Performance graph for Jain Turboline PC® as per Pressure Class-2.

Technical Specifications for Emitter - Metric

Nominal Discharge (lph)	Emitter exponent	Flow coefficient k	Coeff. of mfg. variation CVm	Flow path dimensions (mm)			Inlet filter area (mm²)
	x			Length	Width	Depth	
1.1	0	1.0	1.0	49.6	0.80	0.70	3.54
1.6	0	1.6	1.5	48.5	0.86	0.9	3.22
2.0	0	2.0	1.5	48.8	0.94	1.05	3.33
2.2	0	2.2	2.5	48.8	0.94	1.05	3.33
3.8	0	3.8	2.0	45.0	1.38	1.27	3.21

Flow equation $q = kH^x$, q = nominal discharge, lph, H = Pressure head, kg/cm², x = Emitter exponent

Technical Specifications for Emitter - US

Nominal Discharge (gph)	Emitter exponent	Flow coefficient k	Coeff. of mfg. variation CVm	Flow path dimensions (inch)			Inlet filter area (inch²)
	x			Length	Width	Depth	
0.26	0	0.264	1.0	1.95	0.031	0.028	0.0055
0.42	0	0.423	1.5	1.91	0.034	0.035	0.0050
0.53	0	0.528	1.5	1.92	0.037	0.041	0.0052
0.58	0	0.581	2.5	1.92	0.037	0.041	0.0052
1.00	0	1.004	2.0	1.77	0.054	0.050	0.0050

Flow equation $q = kH^x$, q = Nominal Discharge, gph, H = Pressure head, psi, x = Emitter exponent



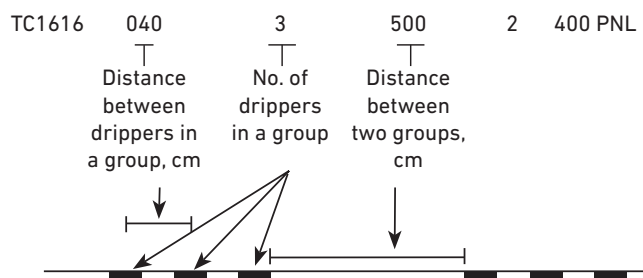
Jain Turbo Cascade® PC,PCAS & PCNL

Ordering Specifications

TC	XX	XX	XXX	X	XXX	P	XX	X
	Nominal diameter in mm	Nominal Discharge in lph x 10	Dripper Spacing in cm	Pressure Rating Class	Standard Coil Length in meter	P - Pressure compensating	NL - Non Leakage AS - Anti Siphon	Color of the tube
								Blank - Standard Black with 'Twin Line' B - Brown (Landscape) W - White (Greenhouse) P - Purple (Reclaimed Water)

Example : TC16220402400PNL - This code refers to Jain Turbo Cascade PCNL option of 16mm nominal diameter having nominal discharge of 2.2 lph, emitter spaced at 40 cm, pressure rating class-2 and standard coil length of 400 m black tube with 'Twin Line'.

- Jain Turbo Cascade PC/AS/NL can be supplied in group spacing on request. Specify distance between drippers in the group, distance between two groups & no. of drippers in a group (minimum three drippers) as,



Note

- Jain Turbo Cascade PC/AS/NL is manufactured with ID control and declared OD are nominal. If you have specific ID or OD requirement, please mention while ordering.
- Jain Turbo Cascade PC/AS/NL can be supplied in any other wall thickness and pressure ratings.

