

Subject: Standard guideline for drip irrigation – to be incorporated in construction – standard guidelines

The following guidelines are to be followed for installation of drip irrigation at all sites.

Material required.

S No	Item	Approx cost in Rs.	Used for
1.	HDPE pipe 1” or 1 1/4”	38 / 46 per meter	Providing water from OHT to entire drip irrigation network.
2.	Ball Valve ½”	200/-	Provide a ball valve at a distance of every 150 ft.
3.	GI 1/2” nipple Elbow	19+23	For connecting to saddle
4.	Saddle 1” or 1 ¼”	30 / 26	Used for tapping from main lane.
5.	PVC 15 or 16 mm nozzle	1.45	For connecting the 16mm LLDPE lateral pipe.
6.	16 mm LLDPE pipe	6.35 per meter	Used as lateral pipe for strip lawns, planters, trees, etc.
7.	8 mm LLDPE pipe	2.55 per meter	Used to connect micro sprinkler to 16 mm lateral pipe.
8.	6 mm LLDPE pipe	1.90 per meter	Used to connect dripper to 16 mm lateral pipe.
9.	8 mm pin connector	1.10	For tapping the 16 mm lateral line.
10.	6 mm pin connector	0.65	For tapping the 16 mm lateral line.
11.	16 mm bends Tees	2.50	For branching 16 mm lateral pipes
12.	16 mm end stopper	2	For closing ends of 16 mm lateral line.
13.	Dripper	2.35	For watering plants and trees
14.	Micro sprinkler with stand	26	For strip lawns and planter boxes
15.	½” PCV electrical conducting pipe	4.50 per meter	Use 18” length pipe for fitting dripper 9” above mud level.

Procedure:

1. For apartment projects lay a 1” or 1 1/4” HDPE pipe along the entire compound wall connected to the OTH. For villa projects lay the HDPE pipe as given in approved plans.
2. Fix saddles for tapping the HDPE pipe at each villa for watering the strip lawn and trees along the foot path. For apartments fix a base saddle at a distance of every 150 ft to tap the HDPE line, concrete with a 9” x 9” x 18” base. For tot-lots and landscape gardens one saddle can be provided. For villas provision (optional) for drip / sprinkler irrigation for lawns inside villas can be made with a 16 mm lateral pipe. LLDPE pipes (16, 8 and 6mm) to be buried in the soil at a depth of about 3” to 6”.

3. Use a 18" long ½" PVC pipe to fix the dripper with a 6mm LLDPE pipe 9" above ground. Use one dripper for each tree. Use one dripper for about every 4 sft for planter boxes eg. for a planter box of size 2'x 4' use 2 drippers.
4. Use stand with 8 mm LLDPE pipe to fix the micro sprinkler about 3" above the grass level. Can also be used for planters with plants less than 6" in height. For strip lawns use one sprinkler every 4 to 5 ft. For larger lawns use sprinklers in a grid of about 6 or 8 ft.
5. In apartments the center open areas can be connected to the drip irrigation through the water connection provided for stilt floor bathrooms.
6. For large lawns do not use drip irrigation or micro sprinklers. Instead use a large brass sprinklers on a stand. Use a 100' or 150' long ¾" water pipe. Fix a hose reel for wrapping the pipe at each tap. Use clips and nozzle to fix the pipe properly and permanently.

Labour rates for installation of drip irrigation.

S No	Item	Rate
1.	Fixing saddle without civil and earth work.	100
2.	Fixing saddle with civil and earth work.	200
3.	Fixing 16 mm lateral line upto 50 ft with out earth work.	50
4.	Fixing of 16 mm lateral pipe beyond 50 ft – for additional length	Rs. 50 every 100 ft
5.	Burying 16 mm LLDPE pipe in earth upto 50 ft.	25
6.	Burying 16 mm LLDPE pipe in earth beyond 50 ft – for additional length	Rs. 25 every 100 ft
7.	Fixing of each dripper	10
8.	Fixing of each sprinkler	10
9.	Fabrication charges for hose reel	200
10.	Fixing charges for hose reel	50

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