

## PROCESS FOR CONNECTING 'LASER SPRAY' TO SUBMAIN PIPE

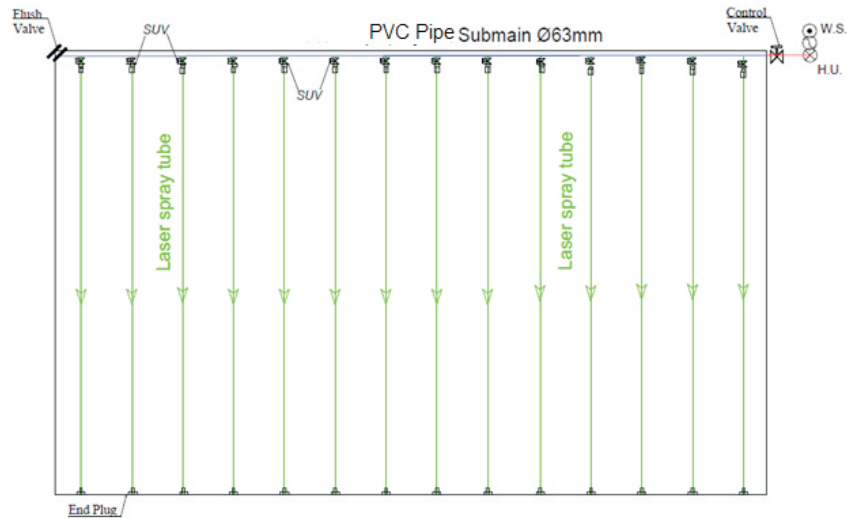


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## SECTION 1

### PVC PIPE USED AS SUBMAIN

Illustrative field layout:

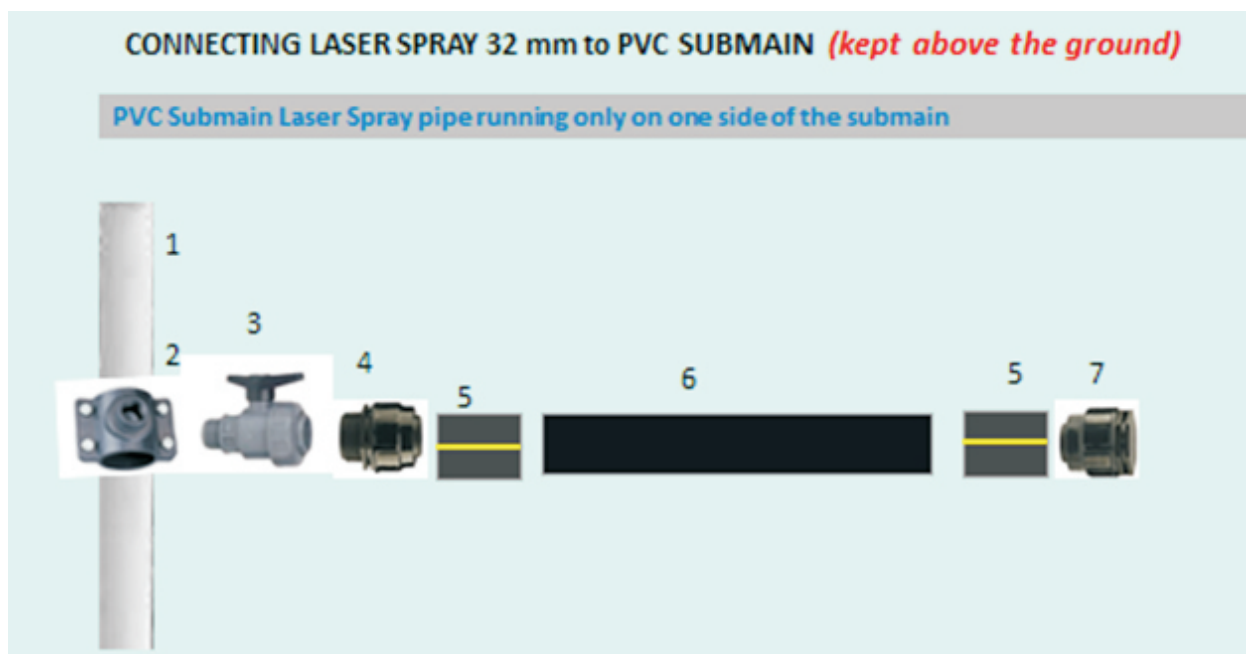


Illustrative field layout with product images:



## Serial No. 1

### Installation of laser spray 32 mm system with PVC pipe sub main using SUV32 HFM



Sr.No.	Code	Product Description
1	PRDA063004IGS00600 PRDA075004IGS00600 PRDA090004IGS00600	PVC pipe 63mm/75mm/90mm sub main
2	DSS063100/DSS075100 /SS090100	Rain port service saddle 32mm(63/75/90mm)
3	DSUV32HFM	SUV 32 HFM: Single union valve 32 mm HFM type
4	DRPMTE3201	Rain port male threaded adapter 32mm
5	DRPPTS3201	PT Sleeve
6	DTLS3200100N	Laser spray 32mm
7	DRPE6322	End Cap for Laser Spray 32mm



## Installation process:

### **Step 1: Making hole on the PVC Pipe for fitting laser spray pipe on it**

- ¾ Mark the location on PVC pipe where laser spray pipe is to be fitted.



- ¾ Take hand drill of 19 mm size to make a hole at the mark



- ¾ Put sharp point of the drill at the mark where hole need to be made. Press and rotate clock wise and antilock wise to make a hole.



### **Step 2: Fix service saddle on the PVC pipe at the location of the hole**

- ¾ Take rainport service saddle 32mm x 63 mm (or 32 mm x 75 mm or 32 mm x 90mm depending on the size of the PVC Pipe sub main going to be used) and dismantle its nuts, bolts and washer.



- ¾ Press the rubber washer by fingers at the slot provided in upper part of rainport service saddle 32mm.



Align the upper portion of rainport service saddle 32mm over hole made with hand drill.



Once upper part is aligned with hole, then press bottom part of service saddle from the other side of the PVC pipe, try to align four holes of both part of saddle.



Now place bolts in each hole of service saddle and tighten then with spanner size 12- 13 mm



The arrangement will look like as shown in the following image.



### Step3. Fixing the single union valve (SUV32HFM) on the service saddle

Take the ball valve 32 mm (SUV32HFM) and wrap teflon tape over its threaded part.



Put threaded part of the valve SUV32HFM inside the threaded inlet of service saddle.



#### Step 4. Fixing the laser spray male threaded adopter on the valve (SUV32HFM)

Take rainport MTA 32 mm ( 1") and put teflon over its threaded portion.



Put the threads of rainport MTA 32 mm ( 1") inside the female threaded part of the valve (SUV32HFM)



For attaching laser spray to rainport MTA 32 mm ( 1"), first remove cap from rainport MTA 32 mm ( 1")



#### Step 5: Fixing laser spray pipe on the male threaded adapter

Take PT sleeve and press over barbed part of rainport MTA 32 mm ( 1")





Take out one end of laser spray by unrolling from roll of laser spray and put rainport cap over the laser spray.



Put the laser spray pipe over PT sleeve and press it over PT sleeve upto the end, which is fitted on barbed part of rainport MTA 32 mm ( 1").

Now press the cap over the PT sleeve as shown in following image , Push the Cap over PT sleeve towards threads of Rainport MTA.



Once the cap reaches the threaded part of MTA , then rotate and tighten the cap till it sufficiently tight to prevent leakage of water during operation.



The final installation will look like as shown in below images.





## Step 6: Fixing end cap at the other end of the laser spray pipe.

Once the laser spray pipe is fixed on the valve (SUV32HFM), Now lay the pipe up to the required length (as per the design of the irrigation system).

Slide the laser spray tube over a PT sleeve. slide it fully.



Remove the ring of the end cap and put the ring over laser spray pipe (With PT sleeve inside)



Slide the laser spray pipe (with PT sleeve inside) over the end cap.



Tighten the ring on the end cap thread.



The final installation will look like this

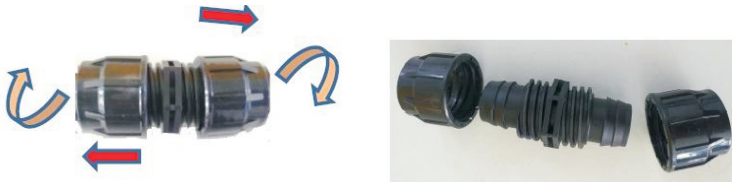


Maximum Length 50 mtr

## Connecting laser spray 32 mm pipes with Joiner

Joiners are used to connect two laser spray pipes. This may require if the pipe is punctured / damaged and need to be removed or, if multiple rolls of spray pipes are to be used in one field.

Remove both the cap from the joiner 32mm



Put both the caps over the both laser spray pipes



Slide the laser spray tube over a PT sleeve on both sides and slide it fully



Press the PT sleeves over the both sides of barbed part of the joiner 32mm



Then push the both caps over it towards the middle of joiner till it reaches the threaded portion of the joiner.



### **Fully tightened joiner**



## Serial No 2

### Installation of laser spray 40 mm system with PVC pipe sub main using SUV40 FRP



<u>Sr No</u>	<u>Code</u>	<u>Product Description</u>
<u>1</u>	<u>PRDA063004IGS00600</u>	<u>PVC pipe 63mm/75mm/90mm</u>
	<u>PRDA075004IGS00600</u>	
	<u>PRDA090004IGS00600</u>	
<u>2</u>	<u>DSS063100/DSS075100 /SS090100</u>	<u>Rainport service saddle 32mm(63/75/90mm)</u>
<u>3</u>	<u>Not available with Driptech</u>	<u>Hex nipple 32 mm</u>
<u>4</u>	<u>SUV32HF40LSCPP</u>	<u>SUV 40 FRP: Single union ball valve of FRP type for laser spray 40 mm</u>
<u>5</u>	<u>DTLS4000100N</u>	<u>Laser spray 40mm</u>
<u>6</u>	<u>LSPCEC40</u>	<u>End cap for laser spray 40mm</u>

**Step1 to 3** - The process upto step 3 as mentioned in serial no. ( 1 ) will remains same.

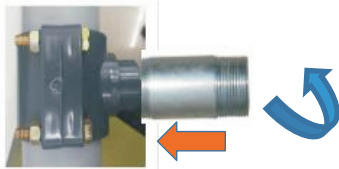


## Step 4

Take a GI hex nipple 1 " or plastic hex nipple 1" and then apply teflon tape on both sides of threads.



First put hex nipple inside the threads of service saddle by tightening clockwise.



Put SUV40FRP on the other end of hex nipple by tightening clockwise.



**Final Installation will look like as shown below**



## Step 5: Connecting laser spray to the single union valve (SUV40FRP)



In order to connect laser spray pipe to single union valve (SUV40FRP) first move ring cap on the tapered portion towards the handle.





Then push laser spray pipe over the taper part. Once laser spray pipe is properly inserted over the tapered portion, then pull the ring cap over laser spray pipe to tighten it.



### Step 5: Fixing the end plug at the other end of the 40mm laser spray pipe.

Once the laser spray pipe is fixed on the SUV40FRP, lay the pipe up to the required length (as per the design of the irrigation system).

Now, to put the end plug at far end of the laser spray pipe, pull back the ring cap on the tapered part of the end plug and then slide the laser spray pipe on the tapered portion of the end plug.



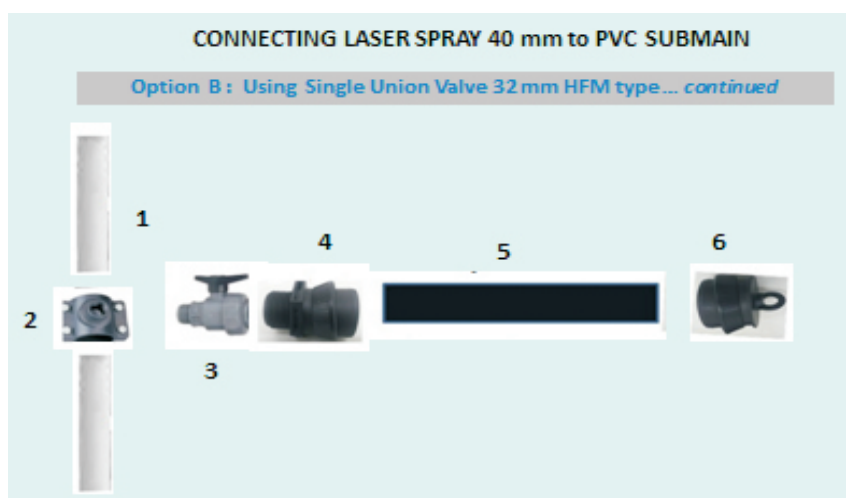
Once laser spray pipe is properly inserted over the taper part, then pull the ring cap over the laser spray pipe and tighten the ring cap.



The final installation will look like this



**Serial No. 3**  
**Installation of laser spray 40 mm system with PVC pipe sub main**  
**using SUV32HFM and laser spray adopter**



Sr No	Code	Product Description
1	PRDA063004IGS00600 PRDA075004IGS00600 PRDA090004IGS00600	PVC pipe 63mm/75mm/90mm submain
2	DSS063100/DSS075100/ SS090100	Rain port service saddle 32mm(63/75/90mm)
3	DSUV32HFM	SUV 32 HFM: single union valve 32 mm HFM type
4	LSPCAD401MBSPT	Laser spray coil adapter 40mmX1"
5	DTLS4000100N	Laser spray 40mm
6	LSPCEC40	End cap for Laser spray 40mm

**Step 1 to 3** Please follow the process mentioned above for laser spray 32mm upto step 3.



**Step 4 : Fixing the laser spray coil adapter 40mmX1" (LSPCAD401MBSPT) on the SUV valve**

Wrap teflon tape on the threads of the adapter



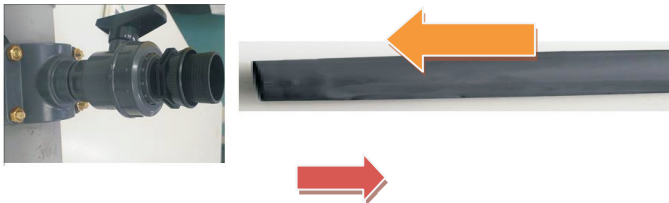
Put the adopter inside the threads of SUV32HFM and tighten it by turning it clockwise.



The assembly after the above steps



### Step 5: Fixing the laser spray 40 mm tube on the adapter



Slide the ring of the adapter backward towards the valve

Slide the laser spray pipe on the adapter

Slide the ring of the adapter forward on to the laser spray tube and tighten it.

**Completed assembly will be as shown below**



## Step 5: Fixing the end plug at the other end of the 40mm laser spray pipe.

Once the laser spray pipe is fixed on the laser spray adopter, now lay the pipe up to the required length (as per the design of the irrigation system).

Now, to put the end plug at this far end of the laser spray pipe, pull back the ring cap on the tapered part of the end plug and then slide the laser spray pipe on the tapered portion of the end plug.



Once laser spray pipe is properly inserted over the taper, then pull the ring cap over the laser spray pipe and tighten the ring cap.



**The final installation will look like this**



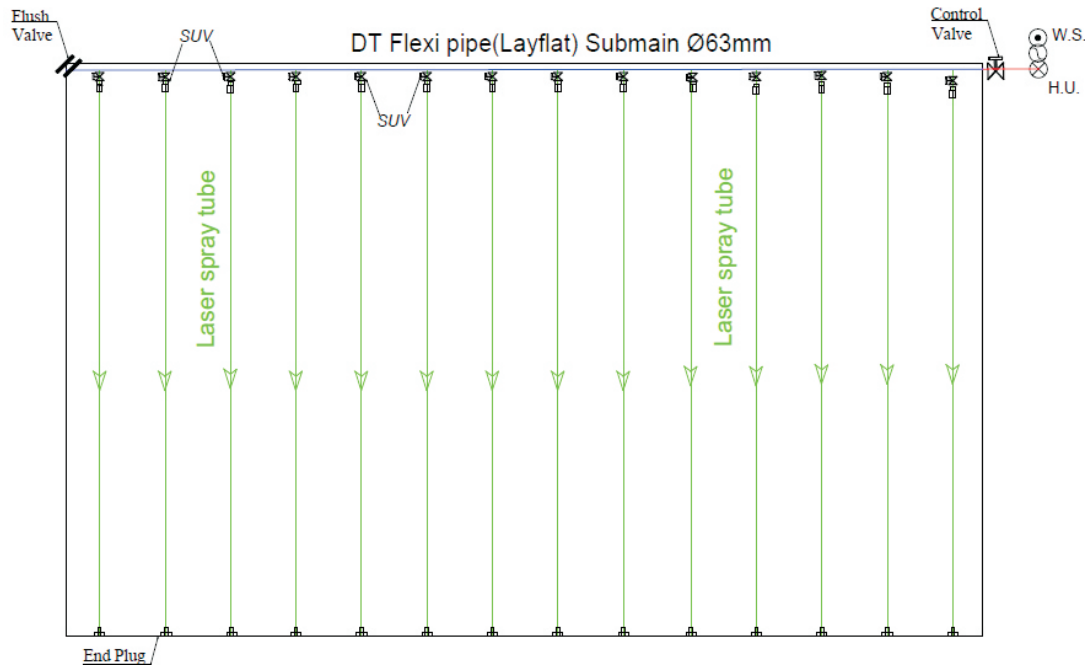
**Maximum Length 60 mtr**



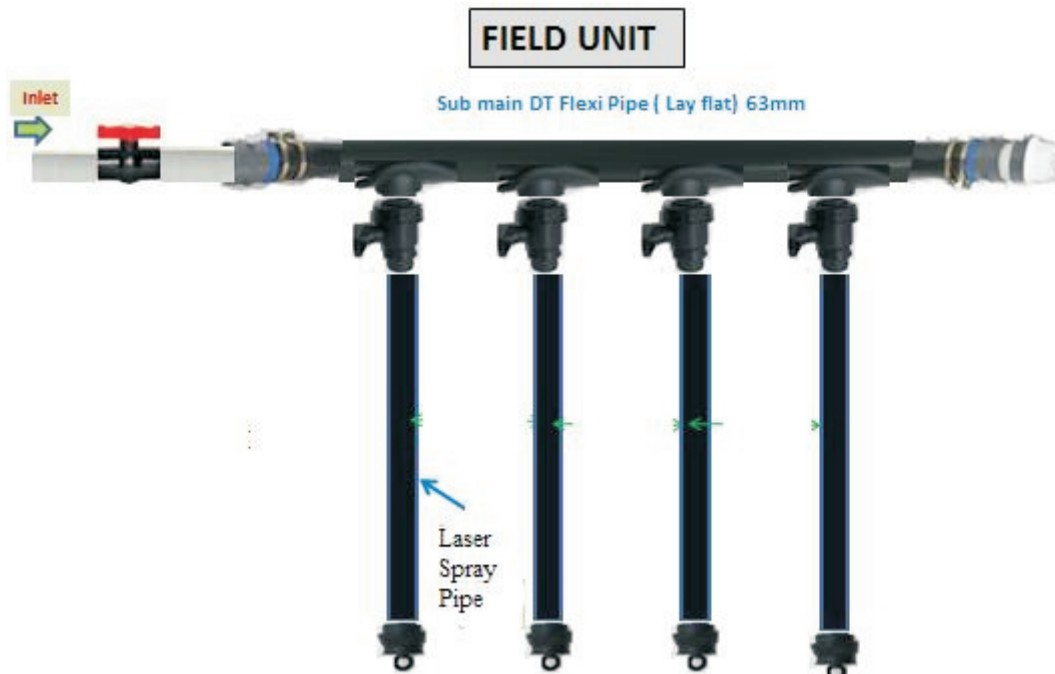
## SECTION 1

### DT FLEXI PIPE USED AS SUBMAIN

Illustrative field layout:

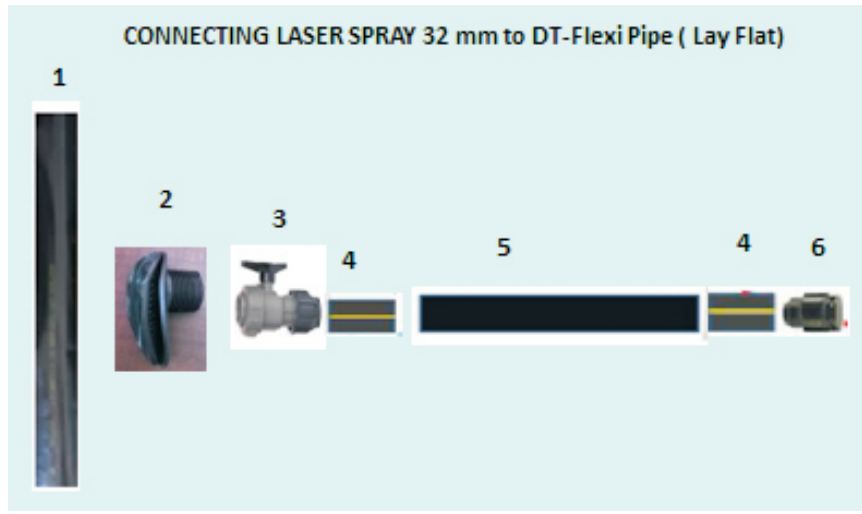


Illustrative field layout:



### Serial No. 4

### Installation of laser spray 32 mm system with DT flexi pipe sub main using SUV32FRP



Sr No	Code	Product Description
1	DTLFI063105M064	DT - Flexi pipe' (Lay Flat Pipe) 63 mm
2	LFLS032MM	L shape adapter 32mm
3	DSUV32FRP	SUV 32 FRP: single union ball valve 32 mm FRP type
4	DRPPTS3201	PT Sleeve
5	DTLS3200100N	Laser spray 32mm
6	DRPE6322	End cap for laser spray 32mm

### Installation process:

#### Step 1: Making hole on the DT-Flexi pipe for fitting laser spray pipe on it

Mark the location on DT-Flexi pipe where laser spray pipe is to be fitted.



Push the folded corner of the DT-Flexi pipe at the chosen location inside the two flanges of the cutting tool



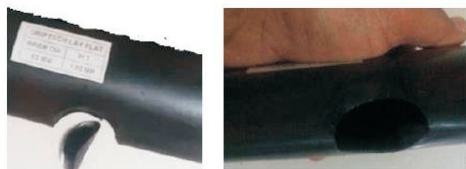
Press the cutting tool fully inside till the DT-Flexi pipe touches the end of the cutting tool.



. Hold the DT-Flexi pipe with your right hand and take the cutter knife in your right hand

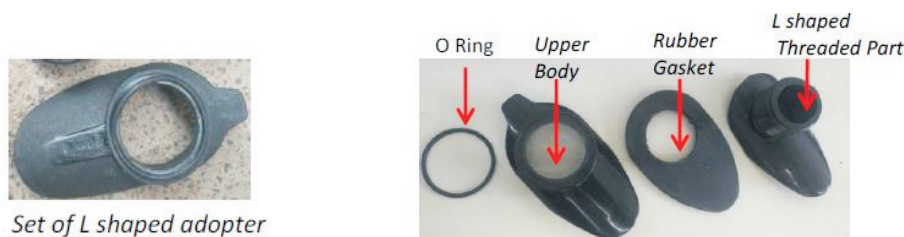


Cut the DT-Flexi pipe with the cutter along the ellipse shaped slot of the cutting tool. Cut in the direction shown in the above images for convenience. Cut carefully and slowly to avoid injury of fingers.



## Step 2: Installation of L shape adapter in hole made in previous step.

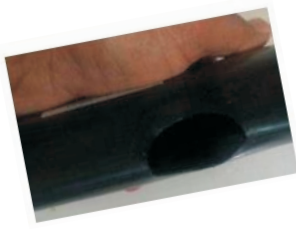
Dismantle the components of the L shaped outlet



Take the SUV32 FRP (i.e. single union valve 1"x 32mm) for use as a handle.

Fix the threaded portion of the L-shaped adapter on the threaded part of the SUV32FRP.

Insert the elliptical flange of the L-shaped adapter into the hole of the DT-Flexi pipe made in Step 1.



Then, press it slightly downward and tilt towards right side by giving additional pressure.



Check that the L-shaped adapter is properly inserted in the hole of the DT-Flexi pipe by moving SUV32FRP up and down.



Then hold the L-shaped adapter with fingers over the DT-Flexi pipe and turn the SUV32FRP anticlockwise to unthread it from the L-shaped adapter and remove it



Note that the SUV32FRP has been used here only as a handle to insert the L shaped adapter into the hole.



Put back the dismantled components of the L-shaped adapter removed earlier on the threaded part of the L-shaped adapter protruding out of the hole of the DT-Flexi pipe. The components to be put are elliptical shaped rubber gasket; elliptical shaped outer body and O- ring in that sequence.





### Step 3: Fixing the SUV 32FRP on the L-shaped adapter

Press the O-ring and the upper body of the L-shaped adapter toward the DT-Flexi pipe.

The threaded portion of the L-shaped adapter is almost fully out of the DT-Flexi pipe.



Put teflon tape over the threads of L shape adapter. So that after tightening of valve there will not be any leakage at joint.



Thread in the SUV32FRP on the L-shaped adapter by rotating it clockwise while holding the L-shaped adapter with left hand fingers. Tighten the union fully.



### Step 4: Connecting laser spray to the single union valve (SUV32FRP)

Slide the laser spray tube over a PT sleeve. Slide it fully.



Remove the cap from the valve SUV32FRP



Remove the Cap from  
the Ball Valve



Put the cap over the laser spray pipe (with PT sleeve inside)



Press the PT sleeve over the barbed part of the valve SUV32FRP. Then push the cap over it towards the valve SUV32FRP till it reaches the threaded portion of the valve.



Once the cap touches the thread of the valve SUV32FRP, turn it clockwise to tighten it fully.



### Step 5: Fixing the end cap at the other end of the laser spray pipe.

Once the laser spray pipe is fixed on the SUV32FRP lay the pipe up to the required length (as per the design of the irrigation system). This step should be done after all the laser spray pipes have been fixed along the sub main.

Slide the laser spray tube over a PT sleeve. Slide it fully.



Remove the ring of the end cap and put the ring over the laser spray pipe (with PT sleeve inside)



Slide the laser spray pipe (with PT sleeve inside) over the end cap.



Tighten the ring on the end cap thread.



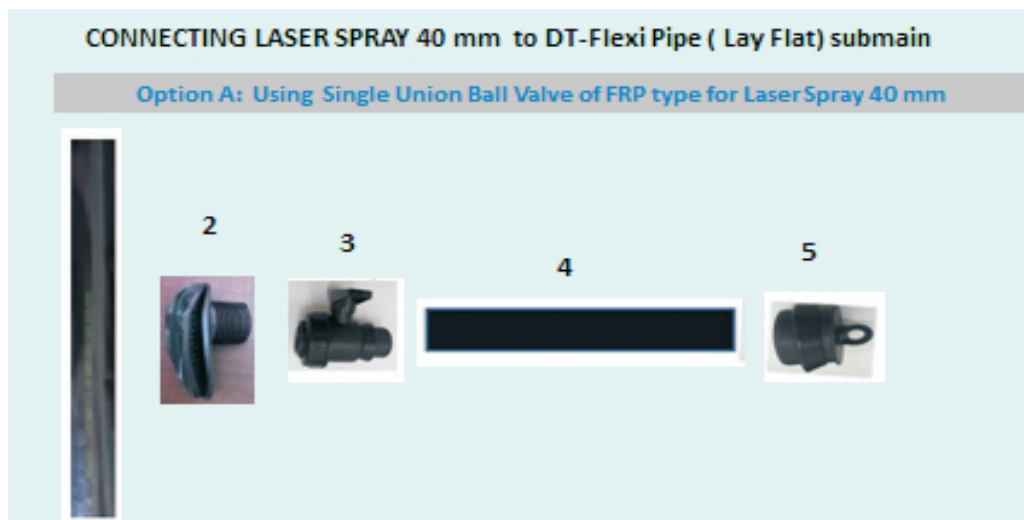
**The final installation will look like this**



**Maximum Length 50 m**

## Serial No. 5

### Installation of laser spray 40 mm system with DT Flexi pipe sub main using SUV40FRP



Sr No	Code	Product Description
1	DTLFI063105M064	DT - Flexi pipe' (Lay flat pipe) 63 mm
2	LFLS032MM	L shape adapter 32mm
3	SUV32HF40LSCPP	SUV 40 FRP: Single union ball valve of FRP type for laser spray 40 mm
4	DTLS4000100N	Laser spray 40mm
5	LSPCEC40	End cap for laser spray 40mm

**Step 1 to 2:** Note that initial the process of Step 1 and Step 2 will remain same as mentioned in in Serial No.04

#### **Step 3: Fixing the SUV 40mm on the L-shaped adapter**

Press the O-ring and the upper body of the L-shaped adapter toward the DT-Flexi pipe so that

The threaded portion of the L-shaped adapter is almost fully out of the DT-Flexi pipe.



Put teflon tape over the threads of L shape adopter. So that after tightening of valve there will not be any leakage at joint.



Thread in the SUV40FRP on the L-shaped adapter by rotating it clockwise while holding the L-shaped adapter with left hand fingers. Tighten the union fully.



#### Step 4: Connecting laser spray to the single union valve (SUV40FRP)



In order to connect laser spray pipe to single union valve (SUV40FRP) first move ring cap on the tapered portion towards the handle.



Then push laser spray pipe over the taper part. Once laser spray pipe is properly inserted over the tapered portion, then pull the ring cap over laser spray pipe to tighten.



#### Step 5: Fixing the end plug at the other end of the 40mm laser spray pipe.

Once the laser spray pipe is fixed on the SUV40FRP, lay the pipe up to the required length (as per the design of the irrigation system).

Now, to put the end plug at this far end of the laser spray pipe, pull back the ring cap on the tapered part of the end plug and then slide the laser spray pipe on the tapered portion of the end plug.



Once laser spray pipe is properly inserted over the taper, then pull the ring cap over the laser spray pipe and tighten the ring cap.

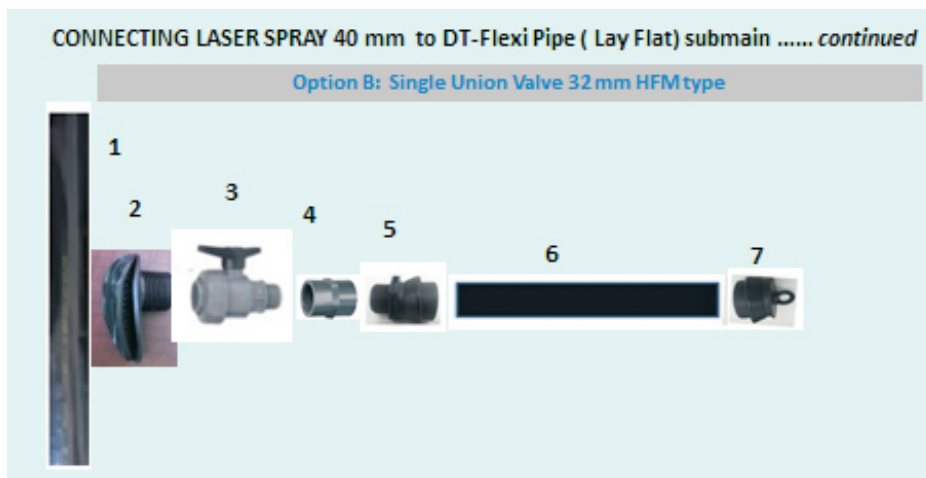


The final installation will look like this



## Serial No. 6

### Installation of laser spray 40mm system with DT-Flexi pipe (Lay Flat) submain - using SUV 32 HFM and adopter *instead of* SUV 40 FRP



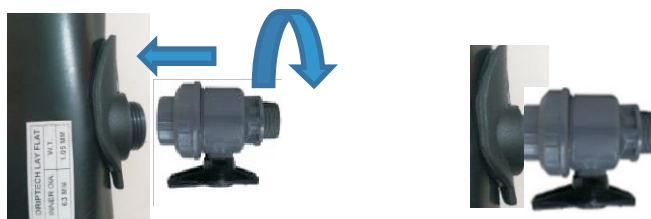
SR NO	CODE	Product Description
1	DTLFI063105M064	DT - Flexi pipe' (Lay Flat Pipe) 63 mm
2	LFLS032MM	L shape adapter 32 mm
3	FTC100	Female threaded coupler 32mm (1")
4	DSUV32HFM	SUV 32 HFM: Single union valve 32 mm HFM type
5	LSPCAD401MBSPT	Laser spray coil adapter 40mmX1
6	DTLS4000100N	Laser spray 40mm
7	LSPCEC40	End cap for laser spray 40mm

Driptech offers an alternative component for irrigation system with laser spray 40mm. Instead of SUV 40FRP, one can use SUV32 HFM in combination with laser spray adapter by using female threaded coupler 1" for connecting valve and adopter. The configuration is as given below.

### Installation Process:

The step 1 and 2 remain same as above.

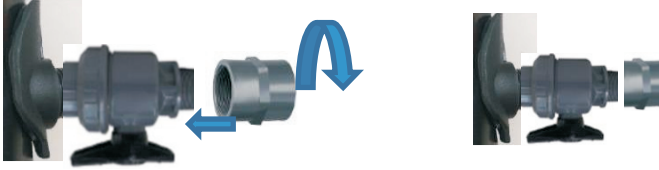
Step 3 is also remaining same except that here SUV 32 HFM. is used instead of SUV 40FRP



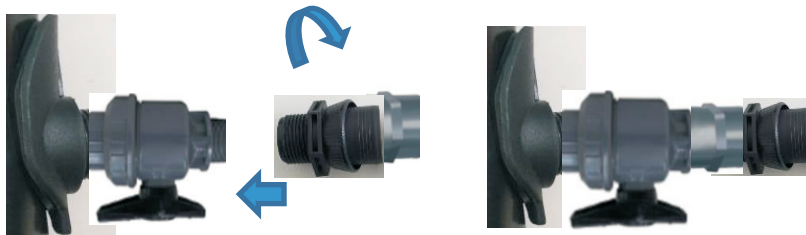


**Step: 4:** The SUV 32 HFM is to be connected to the laser spray pipe through the female threaded coupler (FTC) and laser spray adapter as shown in the above figure

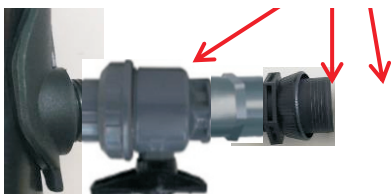
Fix the FTC on the threaded portion of the SUV 32 HFM



Thread- in the laser spray adapter on the other side of the FTA



Always apply teflon over threads at these joints before tightening joints to prevent leakages

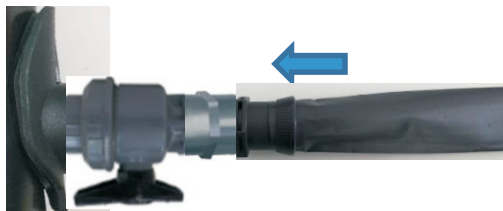


TEFLON TAPE

Connect the laser spray pipe to the laser spray adapter.



Pull the ring cap back as much as possible. Then slide the laser spray tube on to the adapter, once laser spray pipe is properly inserted over the taper, then pull the ring cap over the laser spray pipe and tighten the ring cap



## Step 5: Fixing the end plug at the other end of the 40mm laser spray pipe.

Once the laser spray pipe is fixed on the laser spray adapter, now lay the pipe up to the required length (as per the design of the irrigation system).

Now, to put the end plug at this far end of the laser spray pipe, pull back the ring cap on the tapered part of the end plug and then slide the laser spray pipe on the tapered portion of the end plug.



Once laser spray pipe is properly inserted over the taper, then pull the ring cap over the laser spray pipe and tighten the ring cap.



The final installation will look like this



## Connecting laser spray 40 mm pipes with Joiner

Joiners are used to connect two laser spray 40 mm pipes. This is required if some portion of the pipe is punctured / damaged and is to be removed or, if multiple rolls of spray pipes are to be used in one field.



In order to connect laser spray pipe by using joiner first move the ring cap on the tapered part of the Joiner towards the middle of the joiner. Then push slide laser spray over the tapered part. Once the laser spray pipe is properly inserted over the tapered part, pull both the ring caps over the laser spray pipe to tighten as shown in above image. The ring caps locks the laser spray pipe on the joiner.