

# TPN

THE PROVING NOZZLE



SHOW



IN ACTION



## A NEW WORKING METHOD



### A lot more than a nozzle A lot more than a camera

TPN is a camera nozzle with an integrated Wi-Fi router. Used immediately after a cleaning job, it allows to inspect the sewer in order to certify the status and the condition on to proof the quality of the cleaning.

### How it works

- **Remote control:** once activated wireless with the tablet, the operator inserts the TPN on the pipe; TPN captures the video while going back and forth in the pipeline.
- **Real time control:** out of the pipe and with the wireless connection restored, the tablet automatically loads the video file, just created and georeferenced; this file is immediately available and it can be viewed and shared.

## ADVANTAGES

### For the operators

- With TPN it is possible to proof when and where the cleaning was done
- The output of TPN is the inspection of the pipe with no need for an another cctv crew with the the required equipment
- With TPN it is possible to collect data about the condition of the pipe with no additional costs
- It helps to populate the cleaning jobs database
- It generates new opportunities for cctv, cleaning and rehabilitation

### For the Utility / Municipality

- Correct information about the cleaning jobs performed
- More information at a lower cost, for a better control of the structural condition of the pipes
- Quick information about the hydraulic performance of the sewer network
- It allows to define standard for the cleaning jobs, while contributing to improve the quality of the procedures
- More efficient planning of the short/medium/long term maintenance, while optimizing the cleaning/ cctv/rehabilitation activities

### For the Public Population

- Decreased CO<sub>2</sub> emissions, thanks to the limited interference with the traffic.
- With a more efficient maintenance the damages related to flooding and other critical situations are strongly reduced
- More trust and confidence with regards to the sewer utility and the Administration

# TPN COMPONENTS AND TECHNICAL SPECIFICATIONS

**THE PROVING NOZZLE**

## Nozzle

- **Size (ØxL):** 90x295mm (without centralizer)
- **Weight:** 6,2 kg
- Shaft in Stainless Steel
- 7 jets with 20° inclination, interchangeable inserts
- **Working DN** >150 mm with the proper centralizer
- **Connection:** 1 1/4" (1" - 3/4" with adapter)
- **Flow range:** 150-650 lt/min
- **Working Pressure:** 125-175 bar

## Camera

- Self-leveling HD camera
- Internal memory (32Gb) for video recording format \*.AVI 720i 1280x720
- Integrated Wi-Fi Router for wireless communication
- 7 LEDs ultra-bright lightning
- Li-ion Batteries (duration 8 hours)

## Tablet

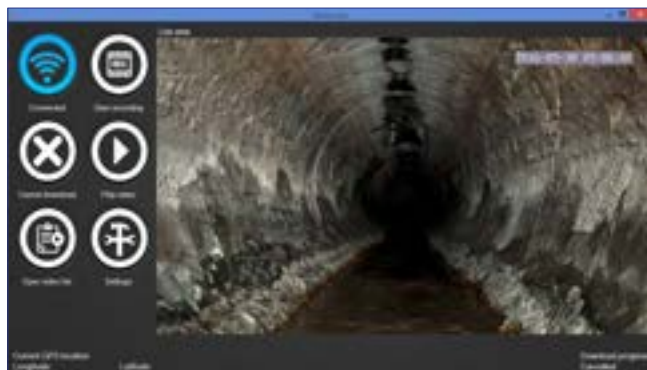
- Rugged tablet Windows 10 Home Edition, IP68
- Display touch screen, 8"
- Micro USB and SD-card slot
- Integrated GPS receiver
- Front and Rear Camera
- HDD 28 GB

## Working Software V2018

- Touch screen Functional keys
- Download video wireless
- Language: English

## Centralizers

- |           |                              |
|-----------|------------------------------|
| 6.X80-100 | TPN120 for pipes from Ø150mm |
| 6.X80-105 | TPN160 for pipes from Ø200mm |
| 6.X80-110 | TPN240 for pipes from Ø300mm |



## INFORMAZIONI PER L'ORDINE

The **TPN** system (#6.X80P-00) includes:

- Nozzle with camera and charger 240V, manual pump for pressurisation, plastic case
- Tablet Windows with working software **TPN** preinstalled
- One centralizer chosen among TPN 120 / 160 / 235

When placing an order please indicate:

- Flow and pressure of the pump
- Size of the hose (3/4", 1" or 1" 1/4)
- Chosen centralizer

