



***AD.EL – IPM** is one of Italy's leading suppliers of complete pressurisation systems thanks to the experience it has acquired from the installation of thousands of systems. It offers a complete line of products that range from pressurisation stations to line transducers and remote-surveillancesystems.*

PRESSURIZATION

Today, the majority of telephone networks across the world are still made of copper cables used to connect several exchanges (primary network), or to connect the users via cabinets and boxes (secondary network).

In normal conditions, the cable sheath, usually made of lead or plastic, guarantees complete water sealing and insulation from external agents. The conductors inside the cable are in turn isolated from one another by paper or plastic coatings.

The main problem of all underground cables is the possible infiltration of water through micro-cracks in the outer sheath. When this happens, the cables quickly go into low insulation and then go out of service. Recovering a flooded cable is very difficult, if not impossible, and often requires the costly replacement of the damaged section.

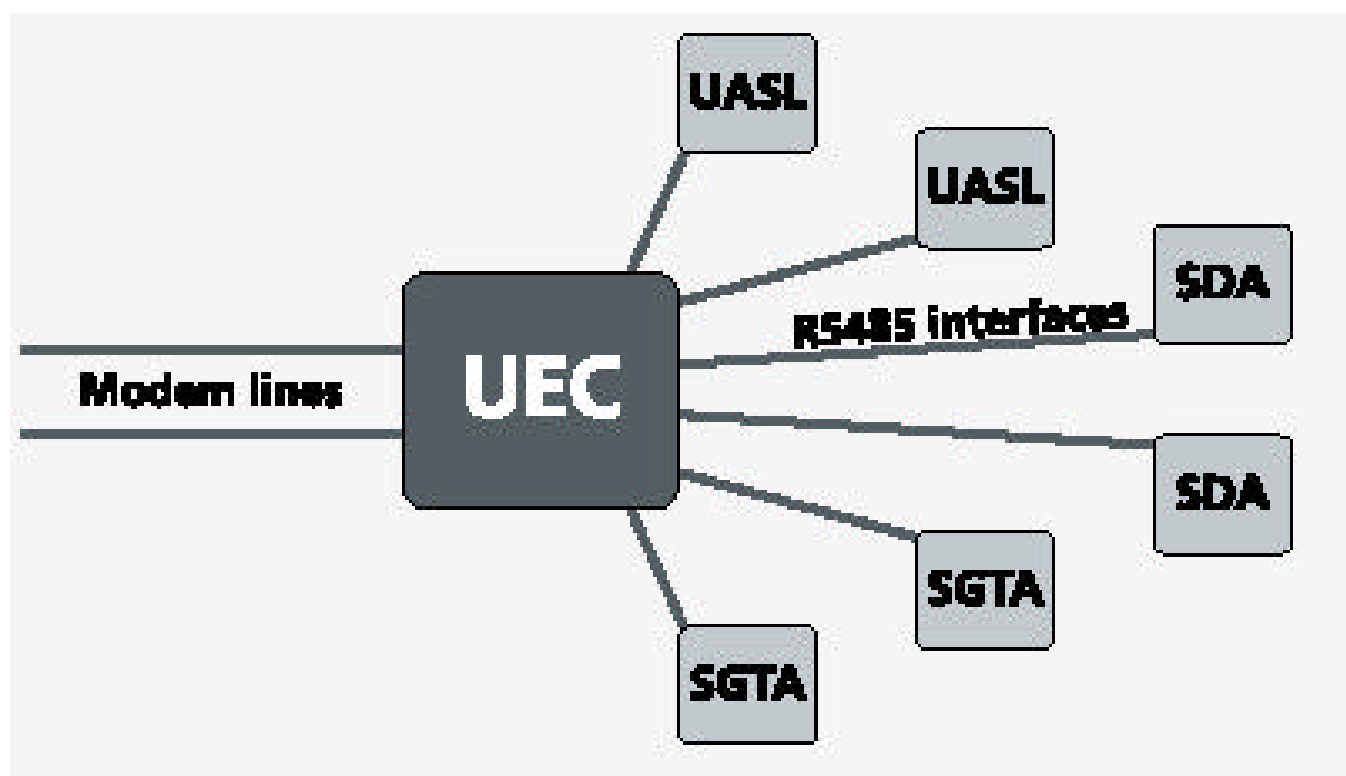
To counter this, the most effective, universally used technique is to pressurise the cable (so that the internal pressure is always superior to the external pressure exerted by the water) and to keep a continuous check both on the air consumption values and the pressure along the entire cable.

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SPU PRESSURISATION SYSTEMS

The SPU system, the result of years of field experience, is the most technically sophisticated and versatile system on the market. Its functions cover all aspects of pressurisation, i.e.:

- Air generation and treatment
- Air distribution
- Checking pressure-transducers along the line
- System alarm management
- External alarm management
- Communication with surveillance centres CDS (SC)



Set-up:

The system has a star configuration in which the Control and Processing Unit (CPU) is connected to all the peripheral units via serial interfaces.

UEC (CPU): Control and Processing Unit.
UASL (LSAU): Line Sensors Acquisition Unit (pressure transducers).
SDA (ADS): Air Distribution Sections.
SGTA (ATGS): Air generation and treatment Systems.
UMI (IMU): Insulation measurement unit.

Modularity:

The modular, versatile structure enables the assembly of stations with different capacities as required. Simply choose the most suitable sections and/or units from the various types and interconnect them via the standard system-interface. The selected CPU automatically recognises the peripherals connected and sets itself to function in that configuration.

In its maximum configuration the station can manage:

- 4 air generation and treatment sections
- 6 air distribution sections (6 x 16=96 cables or wave guides)
- 64 transducer lines for a total exceeding 8000 PT

***SGTA 5000 Dry air production***

Every peripheral section is autonomous and has its own firmware that enables it to operate as normal, even when there is no connection with the CPU, a connection which is obviously necessary to transmit/receive data and/or to programme the sections.

***SDA-SDT-16 Air distribution***

SPU system elements:**- Dry air production:**

SGTA 5000	5000 L/h air generation and treatment section
SGTA N3	2000 L/h air generation and treatment section
UMGTA 2500	2500 L/h mobile air generation and treatment unit
UMGTA 1000	1000 L/h mobile air generation and treatment unit
DM 500	500 L/h air generation and treatment section

- Air distribution:

SDA STD	Air distribution section for 16 cables via REL -V3
REL -V3	Electronic cable air flow and pressure control unit.
SDA Light	Flow control and distribution section for 16 cables.

- Transducer and station control unit:

- **UEC STD** Control unit with LCD monitor and keyboard enables the display of data and programming. It can manage up to 4 SGTA, 6 SDA (96 cables), 4 UASL (64 transducer lines)

- **UEC N3** Control unit with LCD monitor and keyboard enables display and programming. It can manage up to 2 SGTA, 1 SDA (16 cables), 1 UASL (16 transducer lines)

- **UEC Light** Control unit designed to reduce costs, it has the same functions as the standard unit with display and programming on a portable terminal.

- **UASL** Monitoring unit for 16 lines each with 127 pressure transducers.

- **UMI** Monitoring unit with 32 lines with 16 insulation transducers each.



UEC N3
Control section

UASL-16



SPU-N3 Complete station.