

Reference objects for the **vonRoll**geopur wastewater system



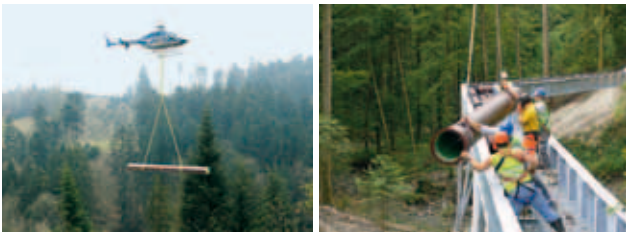
Ins, BE / **Geo-Ecopur piping – mounted on piles**

- Self-supporting, without base slab on non-stable subsoil.
- Full-protection piping with PUR exterior coating.
- Resistant to aggressive soils.
- Passive corrosion protection (PUR).



Malvaglia, TI / **Geopur non-buried piping**

- Without fittings. Pipe deflection along the curved retaining wall occurs in the pipe sleeves.
- Structurally self-supporting, just one support console per pipe section.



Adligenswil, LU / **Geopur piping - wastewater viaduct**

- Helicopter-aided mounting possible thanks to low pipe weight.
- Fast installation thanks to the use of simple sleeve joints.
- Longitudinal expansion for varying temperatures is compensated in every sleeve joint.



Evolène, VS / **Geopur piping - flood relief conduit**

- High abrasion resistance.
- Excavated material can be reused for back filling.
- No transport of external material necessary (gravel, concrete).



Hérémece, VS / **Geopur piping - inverted siphon**

- Low frictional resistance < 0.01 mm thanks to PUR coating
- Pressurised piping, pressure over 7 bar.



Rothenburg, LU / **Geopur piping with little cover**

- High annular stiffness, no concrete base and covering required.
- Pipe slope < 5‰.

vonRollhydro

vonRoll hydro (suisse) ag
 von roll-strasse 24
 ch-4702 oensingen
 tel. 0800 882 020
 fax 062 388 11 78
 www.vonroll-hydro.ch
 info@vonroll-hydro.ch



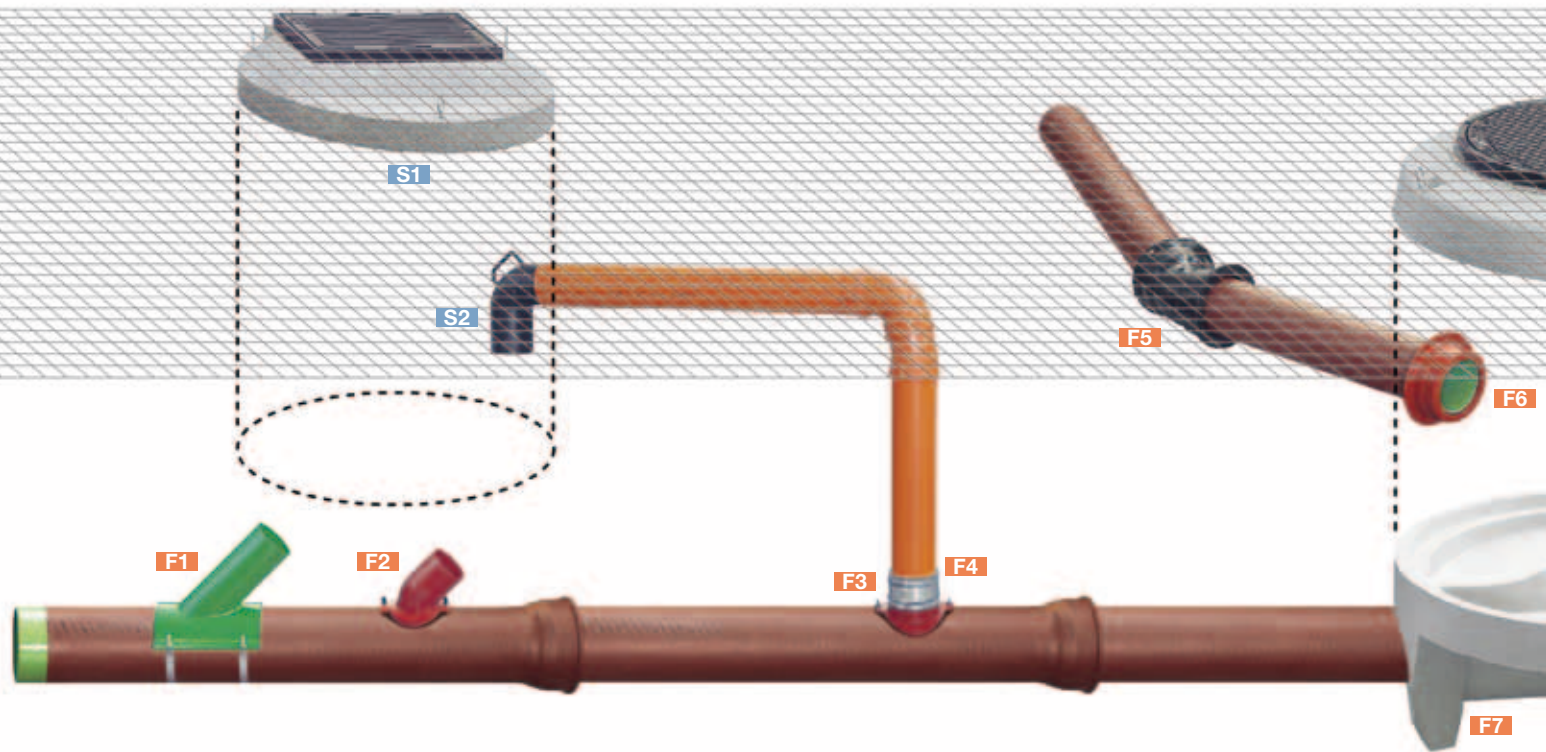
T E C H N O L O G Y W I T H A F U T U R E



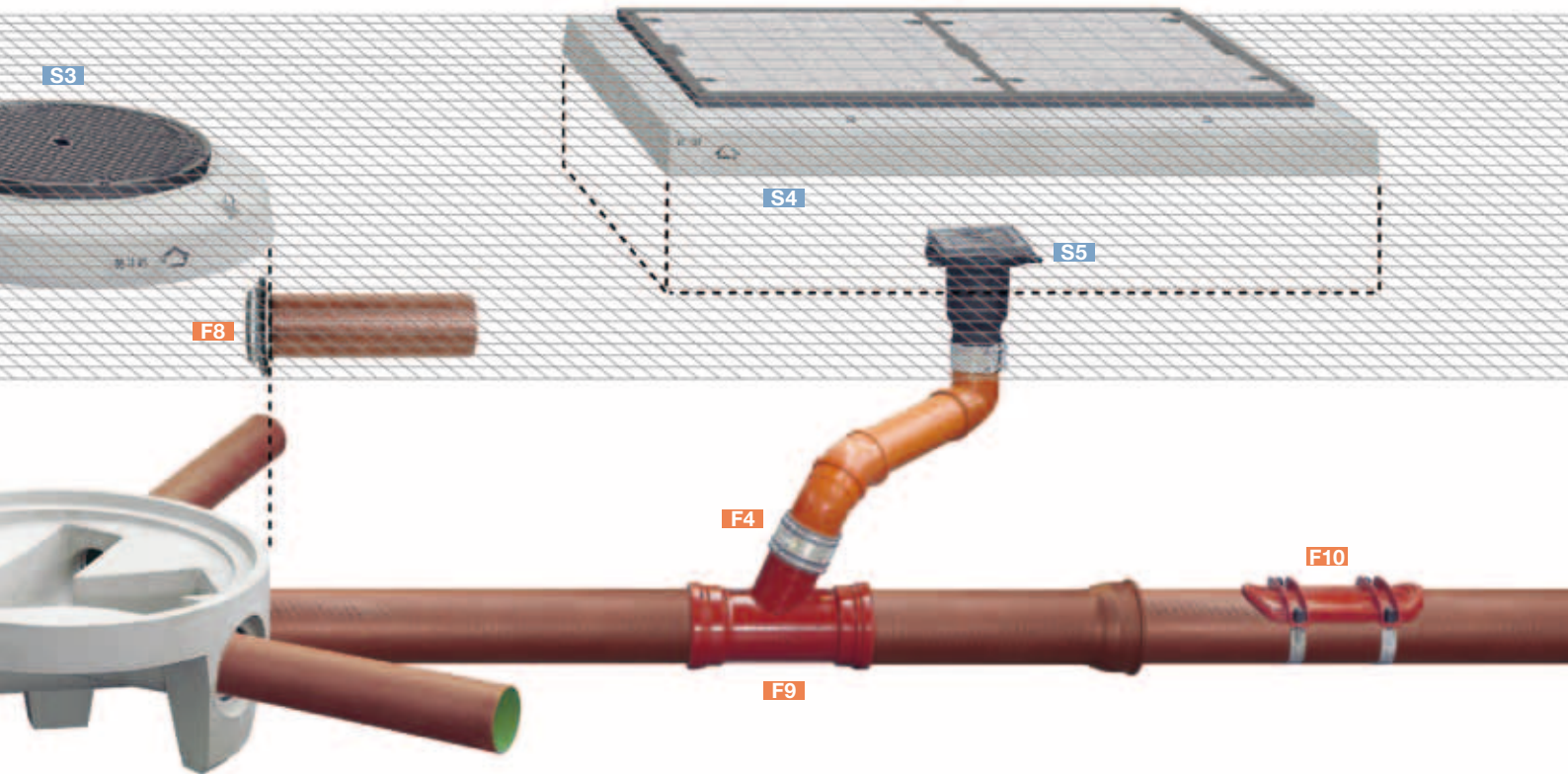
Wastewater systems

- Geopur sewage pipes
- Fittings
- Cast-iron products

The **vonRoll**geopur wastewater piping system with cast-iron products



Geopur pipe characteristics	Advantages
<ul style="list-style-type: none"> Structurally self-supporting 6 m pipe lengths Small external dimensions 	<ul style="list-style-type: none"> Meets highest technical requirements <ul style="list-style-type: none"> - Non-buried piping, e.g. along retaining walls, in tunnels - with pile foundations
<ul style="list-style-type: none"> Low dead weight 	<ul style="list-style-type: none"> Reduction of transport and logistics costs (road/air transport) low supplementary loads on subsidence-susceptible ground
<ul style="list-style-type: none"> Sleeve joints, with protection against longitudinal forces if required 	<ul style="list-style-type: none"> Watertight for all pressure conditions: <ul style="list-style-type: none"> - under vacuum - at high pressure - at low pressure Resistant to penetration by roots
<ul style="list-style-type: none"> PUR-Internal coating 	<ul style="list-style-type: none"> For very low gradients < 5‰ No abrasion, very low frictional resistance <0,01 mm Resists acids, bases and chemical substances
<ul style="list-style-type: none"> High annular stiffness Various external coatings available depending on requirements 	<ul style="list-style-type: none"> No concrete base and covering necessary Reuse of excavated material possible Savings in material delivery and haulage costs
Fittings	Description / characteristics
F1 45° saddle for rectangular aperture	<ul style="list-style-type: none"> Pipe connection by means of cutting (no drilling) Fixing using pipe clips
F2 45° tapping saddle piece	<ul style="list-style-type: none"> Drilled pipe connection (90° tapping hole) screwed on (rust-free screws / sleeves)
F3 90° tapping saddle piece	<ul style="list-style-type: none"> Drilled pipe connection (90° tapping hole) screwed on (rust-free screws / sleeves)
F4 material changeover cuff	<ul style="list-style-type: none"> For the connection of different pipe materials (connection cuff)
F5 bends, 5° to 90°	<ul style="list-style-type: none"> Fittings with sleeve joints for changes of direction
F6 manhole lining	<ul style="list-style-type: none"> For flexible pipe connection to manholes for cementing in
F7 prefabricated manhole base	<ul style="list-style-type: none"> Watertight pipe connections Quick fitting built-in gutters
F8 wall collar	<ul style="list-style-type: none"> Pipe connection for encasing in concrete. For up to 3 bar internal pressure
F9 67° tee	<ul style="list-style-type: none"> Fitting with sleeve joints for pipe connections
F10 service cover for pipe cleaning	<ul style="list-style-type: none"> For pipe maintenance and examination



Cast-iron products	Description / characteristics
S1 road gratings (top assemblies)	<ul style="list-style-type: none"> • High capacity for road drainage • Options: <ul style="list-style-type: none"> - SIBLOC self-locking system - Bikeway gratings - Concave gratings (road runoffs) • With height adjustable to road surface level (NIVROLL, PISO, AURA) • Meet road safety requirements (EN- / VSS standards)
S2 immersed bend	<ul style="list-style-type: none"> • Produces a siphon effect in gullies (road gratings) • Can be removed when cleaning the dirt trap (sludge collector)
S3 manhole covers	<ul style="list-style-type: none"> • Covers for inspection manholes in full cast-iron or cast concrete • Options: <ul style="list-style-type: none"> - for vented systems - backwater secure - can be swung open • With height adjustable to road surface level (NIVROLL, PISO, AURA) • Meet road safety requirements (EN- / VSS standards) (Loading classes in accordance with EN 124 standard)
S4 surface covers	<ul style="list-style-type: none"> • Covers for rectangular manholes (utility manholes) • Modular design. Covers can be mounted adjacent to each other as desired (Models ME, MM) • Thanks to removable supports, even large-size manholes can always be opened to their full extent. <ul style="list-style-type: none"> - odour-lock, dust and rainwater tight - free from play and rattle-free - Meet road safety requirements (EN standards)
S5 floor inlets	<ul style="list-style-type: none"> • Drains for wet rooms, floor surfaces, terraces, multi-storey car parks and manholes • With and without odour lock • Gratings and frames are available in rust-free materials