



E39 Lyngdal Øst-Vest (NO) Water & Frost Protection (Vann- og Frostsikring)

Country	Norway
Type	Road tunnel
Client	Nye Veier AS
Main Contractor	JV Implenia Norge - Stangeland Maskin
Execution of the work	Renesco GmbH- Nuf
Designer	Sweco
Construction Period	2024-2025

Project Description

E39 Lyngdal East - Lyngdal West stretches from Herdal to Røyskår for a total of 11km. The project involves a longer road with several tunnels, bridges and complex infrastructure. The project includes:

- 5.3km of road in daytime
- 6.1-meter double tunnels, divided into two tunnels of 3.7km and 2.7km (Rossåstunnelen and Kålstunnelen)
- 2 longer bridges of 400m and 200m (Kvelland bridge and Hårikstad bridge), and 5 smaller bridges
- 2 motorway crossings with connections to existing roads

Scope of Service

Installation of the water & frost protection system. Installation of fire sections and all kind of details related to membrane works. Installation of contact system on portals. The scope of work includes:

- Installation of membrane from AMV platform with membrane basket
- Thermal welding of LLDPE membrane
- Installation of fire sections
- Installation of stuling (reinforcement fixation)
- Grouting of membrane bolts
- Grouting of technical and light bolts
- Waterproofing of the portal area, Installation of the waterproofing system, 2.1mm PVC-P, with signal layer, Installation of protection geotextile, 900g/sqm polypropylene (PP)
- Supervising water & frost production in Kålstunnelen tunnel
- Air pressure testing of welded membrane.



1. Installation of the water & frost protection, LDPE membrane
2. Thermal Welding/fusion of the LDPE sheet membrane
3. Contact system installation on portal area Kålstunnelen