

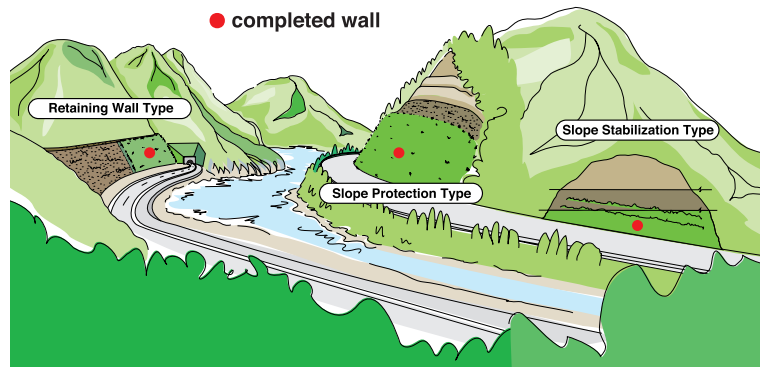
# ROVING WALL

## Continuous Fiber Reinforced Soil System



### Features of Roving Wall

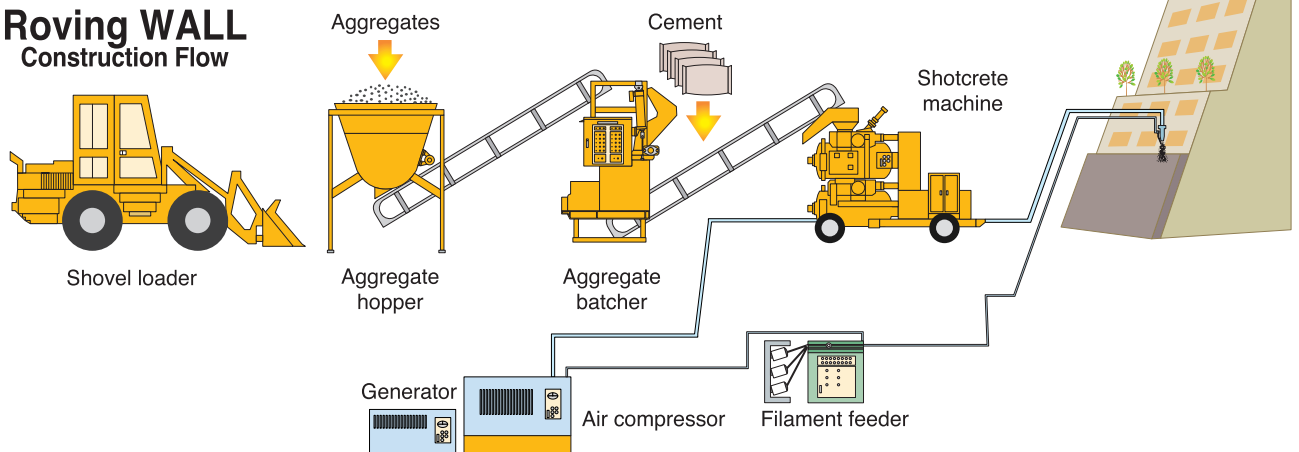
- 1 In the ROVING WALL process, materials consisting of sand, cement and water are mixed with continuous fiber at the spray nozzle and sprayed onto the slope. The fiber increases the shear strength of the sprayed layer and improves erosion resistance so that the reinforced soil becomes a superior material for slope protection from shallow failures.
- 2 The continuous fiber is made of polypropylene, which allows the reinforced soil to be placed on very steep slope areas.
- 3 The continuous fiber reinforced soil creates a soil structure which is flexible enough to be adapted to various surface conditions. The sprayed soil blends with the existing natural terrain and minimizes impacts on existing trees.
- 4 The constructed reinforced soil allows natural growth of vegetation to enhance harmonious landscaping.
- 5 The system, consisting of a conventional shotcrete equipment and a special filament feeder, is portable and adaptable to enhance work efficiency.
- 6 The continuous fiber is delivered by air to a distance of 160 m, enabling work on remote sites and high slopes.
- 7 By modifying cement dosage, strong erosion resistance can be provided without vegetation cover.
- 8 The process uses anchor bars which can hold water retention materials and nursery trees for strong root system development and thick vegetation cover.



### Application

- (1) Roadside slopes
- (2) Dam related slopes (dam site, quarry, shifted road)
- (3) Steep slopes and collapsed slopes
- (4) Slopes in residential / factory areas, parks, golf courses, and railroad sides
- (5) Slopes of very high acidity (impacted by acidic sulphates)
- (6) Surface treatment for light-weight embankment using EPS (expanded polystyrene)
- (7) Surface treatment for shotcreted slopes
- (8) To hide existing grid beams or anchor frames
- (9) To hide existing retaining walls

#### Roving WALL Construction Flow





**Slope Protection Type**

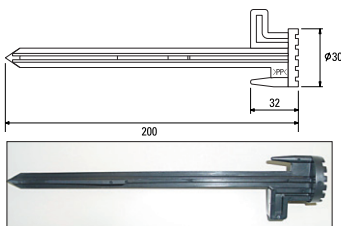
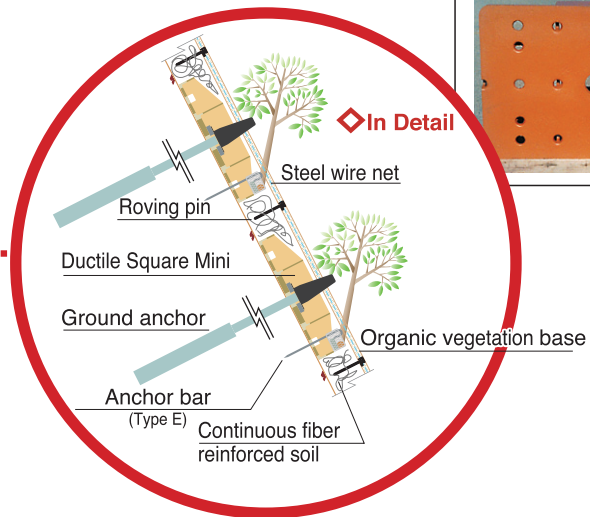
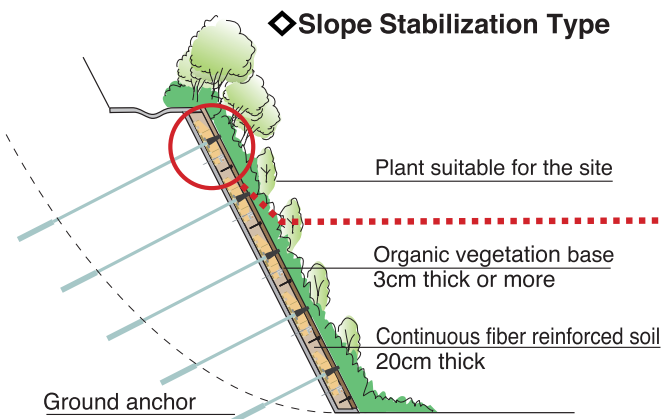
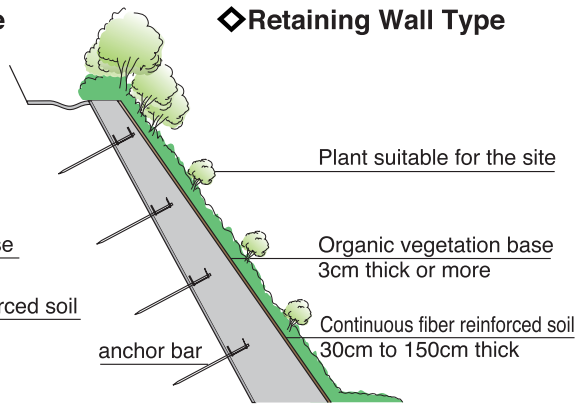
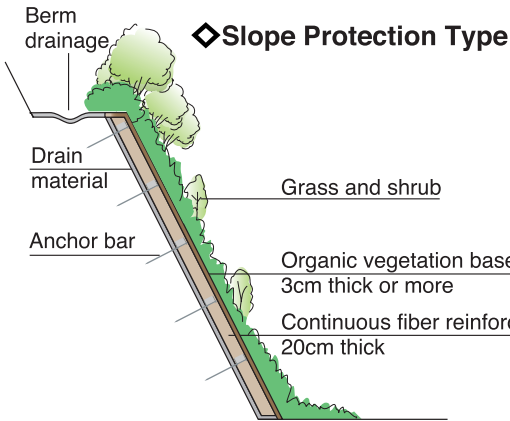
Wall thickness: 20cm

**Retaining Wall Type**

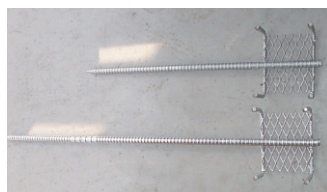
Wall thickness: 30 to 150cm

**Slope Stabilization Type**

Incorporating special anchor frames  
Wall thickness: 20cm



Roving Pin (mm)



Anchor bar (Type A, B)



Filament Feeder

**Auto Mach Feeder Specification**

Feeding Capacity	Fiber thickness	100 to 800 dtex (3,300 dtex maximum)	
	Feeding speed	700 to 2,000 m/min	
Compressed Air	Delivery hose length	50m(160m maximum)	
	Hose diameter	Ø25mm	
Power supply	Pressure	7kgf/cm <sup>2</sup>	
	Air consumption	1.5 Nm <sup>3</sup> /min(2 Nm <sup>3</sup> /min maximum)	
Dimension	Power supply	Single-phase 100 VAC-50/60 Hz	
	Power consumption	200VA maximum	
Weight	Width	Length	Height
	915mm	580mm	1,051mm
		300kg	

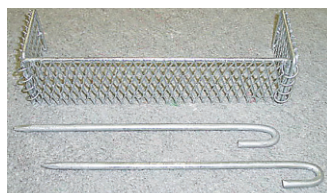
**Georobe Specifications**

Material	100% Polypropylene
Product name	Mitsubishi multifilament
Type	220dtex/40F
Fineness/dtex	220dtex ± 13dtex
Breaking load	3.5cn/dtex or more
Elongation	60% ± 20%
Fiber thickness	Ø0.179mm(179µm)

note: "tex" indicates weight(g) of fiber of 1,000m.  
220 decitex(dtex) or 22 tex means that the fiber of 1,000m weighs 22g.



Moist Block (water retention material)



Anchor bar (Type E) to be used with ductile frame



Georobe



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