

Z | MAKINA

WICK DRAIN



Prefabricated Vertical Wick Drain

Prefabricated Vertical Drains, also known as Wick Drains, are used to accelerate the consolidation of compressible soils. It is applied in soil improvement projects to provide a conduit for the pore water to flow easily. PVDs are installed into the ground using the hollow mandrel that hoses and protects the PVD material. The mandrel is hydraulically driven by means of a hydraulic cylinder with a crowd mechanism into the compressible soil to the design depth so that the wick drain anchors in the incompressible materials underlying the compressible soils. The mandrel is then withdrawn leaving the PVD in place. PVD installation rigs are equipped with Data Logger computerized measuring and recording systems that provide the installation details.

Suitable excavator installation is made according to the machine size. Depending on the soil conditions, it can be designed according to 2 different pressing and pulling forces. Machine height can be increased or decreased provided that the upper and lower booms and main booms are fixed. According that, this application could be done with different depths.

It is designed to use in construction works such as building residences, malls, harbours, roads and runways for airports.

		ZWD20-200	ZWD20-300	ZWD30-200	ZWD30-300
Drain depth capacity	m	20	20	30	30
Height Of Mast	m	24	24	34	34
Pull Down Force (at 320 BAR)	kN	204	305	204	305
Pull Up Force (at 320 BAR)	kN	130	200	180	180
Pull Down Speed	m/sec	1,30	0,90	1,30	0,90
Pull Down Speed Optional	m/sec	2,80	1,95	2,80	1,95
Pull Up Speed	m/sec	2,10	1,40	2,40	1,50
Suitable Excavator Weight	ton	45	45	70	70

SPEED UP SYSTEM

Approx 2x pull down speed engineered by Z Makina*

* if requested, the pull down speed can be increased by 2 times with an acceleration valve. With this acceleration valve it will run till 180 bars. When the pull down force exceeds 180 bars, it will outcome and be impact of normative work conditions depending on the enabling soil conditions.



**STANDARD EQUIPMENT
ZDATA Data Logger**

Recorded Parameters

Depth Meter

Driving Force

Pressure Gauge

Number of installed drains

Cycle time of each drain

**OPTIONAL EQUIPMENT
DIALOG Data Logger**

Recorded Parameters

Depth Meter

Driving Force

Pressure Gauge

Number of installed drains

Cycle time of each drain

Positioning With GPS



Z MAKINA TEKNOLOJISI A.S

S.S. İstanbul Mermerciler Küçük Sanayi Sitesi Yapı Kooperatifi
29. Sokak No: 9 Köşeler Mah. 41455 Dilovası, Kocaeli, TÜRKİYE
info@zmakina.com.tr - +90 262 728 11 22
www.zmakina.com.tr