

# Volcan<sup>®</sup>

Measuring ESP hoppers  
to provide accurate  
measurements of the fly  
ash gathered in these  
hoppers



*Changing the market  
from level to volume*

# Technical Data

## Materials, non-wetted parts

Housing	Painted aluminum die casting
Inspection window in housing	Polycarbonate
Antenna	Painted aluminum die casting / ETFE

## Weight

3DLevelScanner	5.6 Kg (12.35 lb)
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## Output variable

Output signal	Active 4...20mA/HART/RS485/Modbus
Resolution	10 $\mu$ A
Fault signal	Current output unchanged, 22 mA, >3.6 mA (adjustable)
Current limitation	22 mA
Maximal Load	400 Ohm

## Communication

Type	RS485/Modbus/HART
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## Ambient conditions

Ambient, storage and transport temperature	-40...85°C (-40...+185°F)
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## Process conditions

Vessel pressure	-0.2...3 bar (-2.9...43.5 PSI)
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## Process temperature

Measured on the process fitting	-40...+180°C (-40...+350°F)
Vibration resistance	Mechanical vibrations with 2g and 5...200 Hz

## Electromechanical data

Cable entry/plug	1 x M20x1.5 (cable- $\varnothing$ 8...12mm), 1 x blind stopper M20x1.5 Or 2 x cable entry 1/2" NPT
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## Display panel

LCD	4 lines x 20 characters
Adjustment elements	4 keys

## Power supply – 4-wire instrument (Active) 4...20 mA / HART

Supply voltage	18...32 VDC
Power consumption	max 1.5 W @ 24VDC

## Electrical protective measures

Protection	IP67 according to IEC 60529
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## CE

EMC	
Emission	EN 61326:1997 (class B)
Susceptibility	IEC / EN 61326:1997 + A1:1998 + A2:2001 + A3:2003
NSR (73/23/EWG)	EN 61010-1:2001

## FCC

Conformity	to part 15 of the FCC regulations FCC 47 CFR part 15:2007, subpart B, class A
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## Measurement characteristics

Frequency	2 KHz to 10 KHz
Beam angle	30 - 70 degrees

Measuring ESP hoppers to provide accurate measurements of the fly ash gathered.

Volcan® is dust-penetrating, measuring even materials with low dielectric constant, and its built-in self-cleaning technology makes it practically maintenance-free. These features qualify it as the perfect solution for harsh fly ash environments.

By determining the amount and formation of fly ash inside the hoppers (including buildups), Volcan® enables:

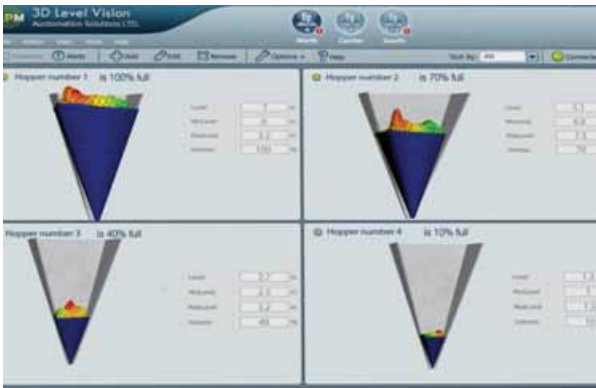
- Savings through process-control inside and outside the hoppers.
- In order to prevent malfunctions and air pollution, the precipitator's potential can be changed by adjusting the temperature of the heating plates according to the build-up location.
- Better controlled hopper emptying
- Early detection of system malfunctions
- Reduced wear and tear

Volcan® includes an array of three antennas that generate low-frequency acoustic signals and receive echo signals from the hopper's contents. Using three antennas provides a detailed view of the material's surface, allowing high accuracy volume measurements and a 3D representation of material formation. Surface visualization can be shared by remote computer in the control room.

As the only solution on the market providing ongoing, real-time volumetric fly ash readings, the Volcan® scanner allows managers to efficiently control their ESPs' fly ash.

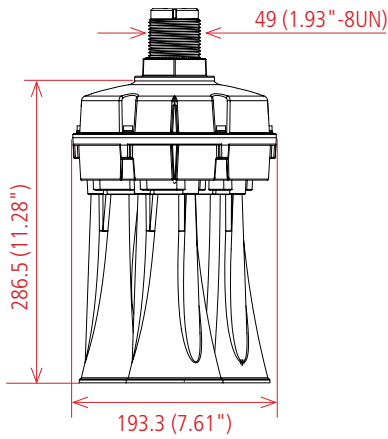
The Volcan® installed in each hopper is a continuous measurement device that can be connected to any PLC or SCADA system, making it the ultimate control system that allows manager to see in real time what is actually going on inside the hopper.

Managers  
can now see,  
in real time,  
what is going  
on inside the  
hopper.

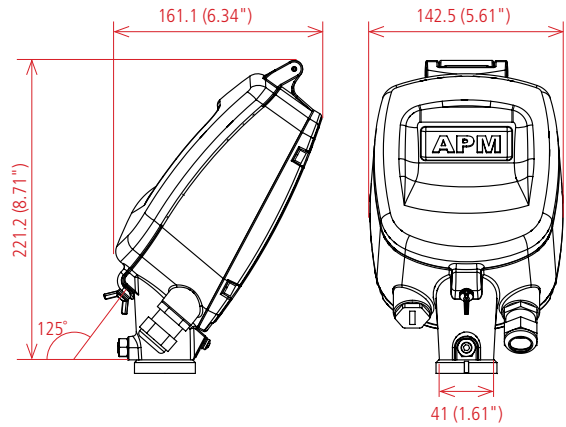


# Dimensions

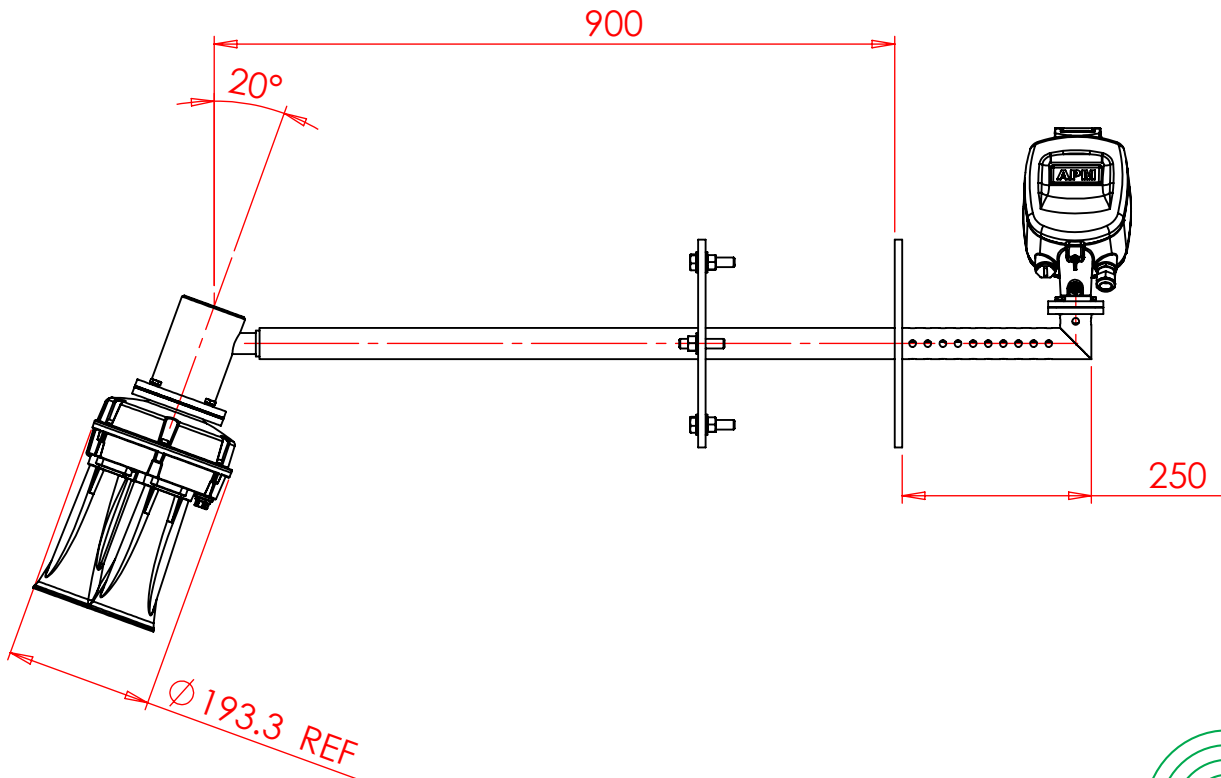
## 3DLevelScanner with horn antenna in threaded version



## 3DLevelScanner Housing



## Mounting Bracket



BR00000003 REV. 00

Sharon Shoham Graphic Design



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