

# Air in Motion.



## Wolter Vehicle Exhaust Fan

- VE Series
- VD Series



## SOLUTIONS...

Vehicle Exhaust Extraction System

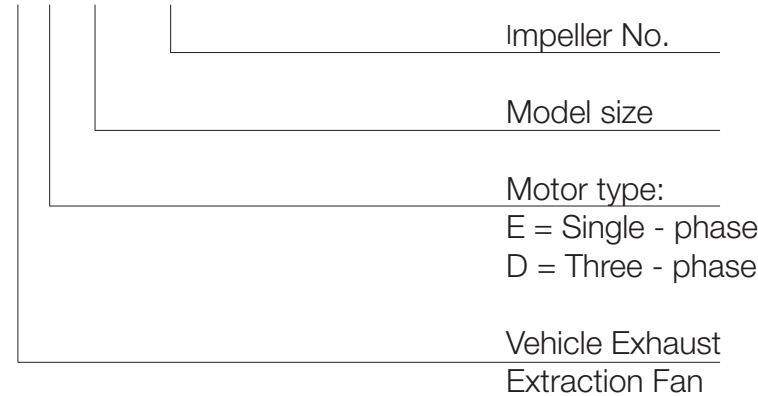
# V01

**wolter** 

## Wolter Vehicle Exhaust Extraction Fan - VE, VD

### Fan type code

**VE 320 - 30**



### Design features

VE / VD Direct driven fan are single inlet fans for vehicle exhaust extraction systems application.

### Casing

The machine folded scroll is made of galvanized sheet steel as standard. Predrilled holes are located in the side plates to fix mounting frames. It provides for easy installation.

### Impeller

The torsion-resistant impellers guarantee a high standard of technology regarding volume flows and processing. The impellers with the shaft are statically and dynamically balanced on precision machines according to quality standard Q 2.5 of VDI 2060, AMCA 204 & ISO 14694. The backward curved impellers are made of steel with powder coated or galvanized / stainless steel as option. All impellers guarantee highest

peripheral speed. The aero dynamical design stands for the precision of these modern high efficiency impellers.

### Motor

IEC motors of protection Class IP55, insulation class F & optional Class H for operating at higher ambient temperatures can be offered.

### Performance curves

The performance curves have been established using the outlet test method in the test chamber according to AMCA 210 installation B (free inlet, ducted outlet).

### Sound level

The sound power level dB(A) figures shown on the performance curve are measured from the fan casing with connected ducts on both inlet and outlet side according to AMCA 300.

## Wolter Vehicle Exhaust Extraction System

### The value of clean air

Exposure to hazardous vehicle exhaust emissions can cause serious health problems for you and your employees. The most efficient way to combat that exposure is to capture the exhaust fumes at the source and eliminate contact with harmful pollutants.

Wolter offers various systems that capture, extract and remove gas and diesel exhaust emissions, creating a cleaner and healthier work environment for your personnel.

### Meeting the standards

- › EPA - Environmental Protection Agency has classified benzene as a known human carcinogen for all routes of exposure. OSHA - Occupational Safety & Health Administration states that an employer shall assure that no employee is exposed to an airborne concentration of benzene in excess of 1 part of Benzene per million parts of air (1 ppm) as an 8-hour time-weighted average. [www.epa.gov](http://www.epa.gov) & [www.osha.gov](http://www.osha.gov).
- › CDC - Centers for Disease Control & Prevention reports that exhaust from any improperly maintained vehicle can pose serious hazards. The most common source of carbon monoxide is automobile exhaust vented in confined spaces. Proper ventilation and prevention must be assured. [www.cdc.gov](http://www.cdc.gov).
- › NIOSH - National Institute for Occupational Safety & Health states that there can be no safe level of exposure to a carcinogen; therefore the NIOSH Threshold Limit Value is "lowest feasible level". [www.cdc.gov/niosh](http://www.cdc.gov/niosh).
- › WHO - World Health Organization and the IARC - International Agency for Research on Cancer, classified diesel engine exhaust as carcinogenic to humans (Group 1), based on sufficient evidence that exposure is associated with an increased risk for lung cancer. [www.iarc.fr](http://www.iarc.fr).
- › ISO 9001:2008, UL, CE, AMCA International.

Wolter systems are designed to meet or exceed these standards.

### The Difference

We can provide installations for source capture and ventilation systems in various industries including:

- › Military Facilities
- › Automobile Plants
- › Department of Transportation Facilities
- › Motorcycle / ATV Garages
- › Emergency Service Stations
- › Fleet Service & Repair Bays
- › Agricultural Equipment Facilities
- › Bus Depots

### About diesel exhaust

- › The World Health Organization (WHO) classified diesel engine exhaust as carcinogenic to humans, based on sufficient evidence that exposure is associated with an increased risk for lung cancer.
- › The EPA has determined that the size of the average diesel exhaust particle size is 0.2 microns. These particles are typically not visible to the human eye.
- › Diesel exhaust particles are often too small to be captured by onboard filters. Toxic gases are not captured by particulate filters, and only partially by activated carbon filters. The Wolter source capture system captures these particles and gases before they enter a facility, and expels them to the outside.
- › Diesel exhaust particles and gases are suspended in the air, so exposure to this pollutant occurs whenever a person breathes air that contains these substances. This also occurs when an individual touches a surface where these particles have settled into.
- › Like all fuel-burning equipment, diesel exhaust contains nitrogen oxides. Nitrogen oxides can damage lung tissue, lower the body's resistance to respiratory infection and worsen chronic lung diseases, such as asthma.

## Wolter Vehicle Exhaust Extraction System

### Spring Operated Vehicle Exhaust Hose Reel - VHS Series

Spring operated exhaust reel systems are recommended for smaller working areas.

Service technician pulls down exhaust hose and attaches nozzle to vehicle. When finished, pull on hose again and it smoothly retracts the hose.

Single spring module:

Max. load: 18.00 kg

Double spring module:

Max. load: 36.00 kg



### Vehicle Exhaust Motorized Hose Reel - VHM Series

When your workshop has a high ceiling, in order to facilitate larger vehicles, you will need a hose reel that can wind the hose all the way back on the reel.

With no hoses hanging down you can also operate other appliances in the workshop such as cranes or lifts.

Std duty:

0.37kW-6P,  
380~440V/3/50Hz, 1,30A,  
910rpm, max load 34kg

0.55kW-6P,  
220~240V/1/50Hz, 3,61A,  
920rpm, max load 34kg

Heavy duty:

0.55kW-6P,  
380~440V/3/50Hz, 1,86A,  
910rpm, max. load 50kg



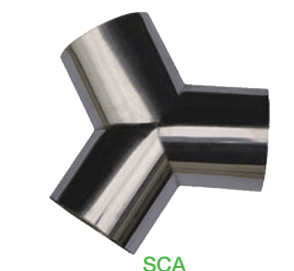
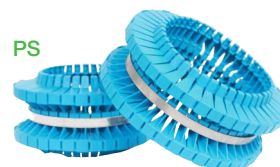
### Nozzles and accessories

Our nozzle range is designed to deal with the characteristics of exhaust gases, with the single purpose of keeping these harmful gases out of the human breathing zone.

The nozzles can be used on moving or stationary vehicles, and for a wide number of exhaust pipes, which can be horizontally or vertically positioned. Our wide range of nozzles fit to all commonly used exhaust pipes.

#### Features

- › All nozzles are easy and quick to connect or disconnect.
- › The metal nozzles are capable of handling high exhaust temperatures.
- › Special outlets in the rubber nozzles for emission testing.
- › Available for a range of different hose diameters.
- › Various ways to connect to the vehicle.
- › Quick disconnect fittings available to allow rapid / easy nozzle swap out.



## Technical Data

Model	Speed	Power	Current	Capacitor	Max. Airflow	Sound Power Level	Weight
Size	[1/min]	[kW]	[A]	[µf]	[m³/h]	[dB(A)]	[KG]

(Power Supply: Single Phase 50Hz 220V)

VE 300-13	2880	0,37	2,73	12	1050	63	13,5
VE 300-18	2880	0,55	3,88	16	1220	64	14,2
VE 300-21	2880	0,75	5,15	30	1560	66	21,0
VE 320-30	2880	1,1	7,02	35	2600	68	31,2
VE 380-47	2880	2,2	13,7	40	3720	76	50,0

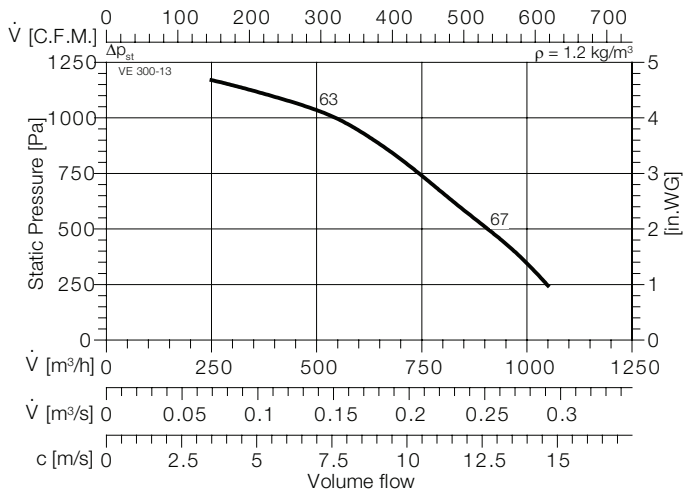
(Power Supply: Three Phases 50Hz 400V)

VD 300-13	2880	0,37	0,94	-	1050	63	20,2
VD 300-18	2880	0,55	1,33	-	1220	64	20,9
VD 300-21	2880	0,75	1,81	-	1560	66	27,8
VD 320-30	2880	1,1	2,52	-	2600	68	37,2
VD 380-47	2880	2,2	4,69	-	3720	76	58,5
VD 400-58	2880	3,0	6,00	-	5660	76	82,5
VD 450-67	2880	4,0	7,72	-	7200	77	97,0
VD 500-76	1450	1,1	2,74	-	4000	63	98,0
VD 500-76	2880	5,5	10,5	-	8600	78	113

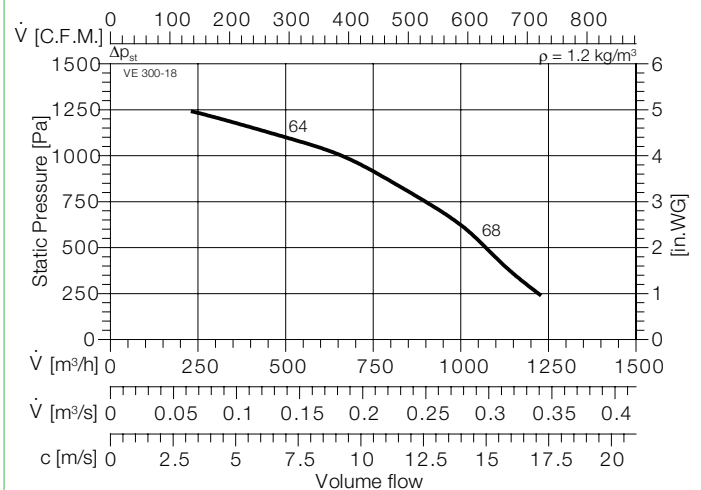
- Note: 1, The volume airflow indicated above is measured in AMCA 210 chamber;  
 2, The sound level are measured from the fan body when ducts are connected on both inlet and outlet side.  
 3, Subject to change without prior notice.

## Performance curves

### VE / VD 300-13

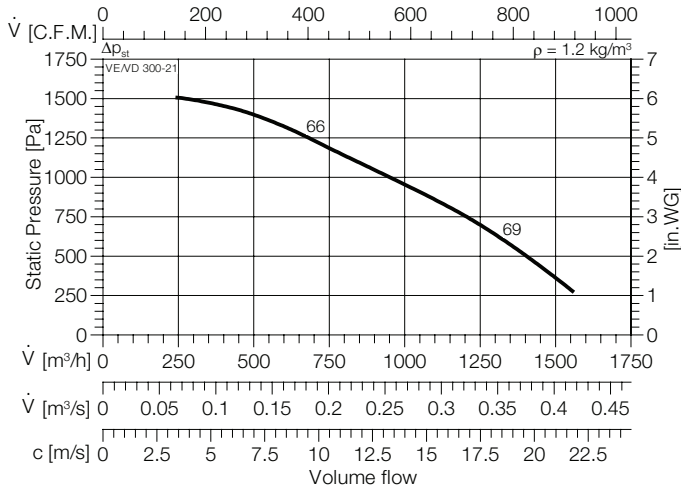


### VE / VD 300-18

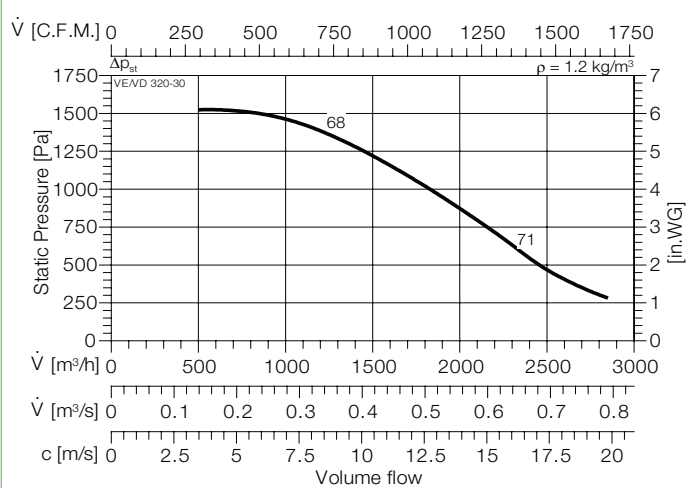


## Performance curves

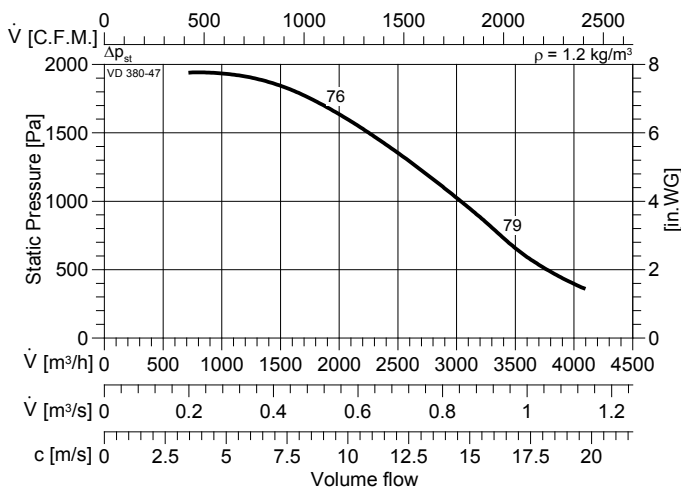
VE / VD 300-21



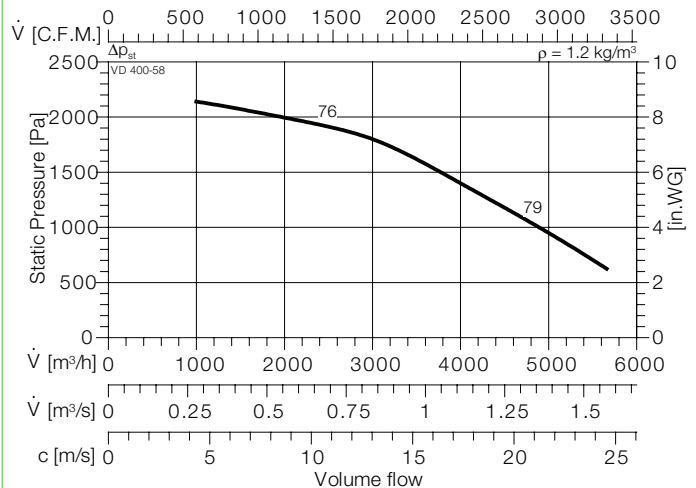
VE / VD 320-30



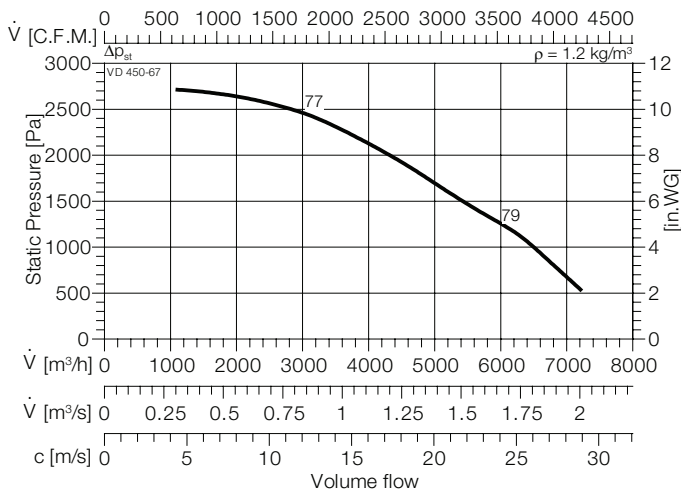
VE / VD 380-47



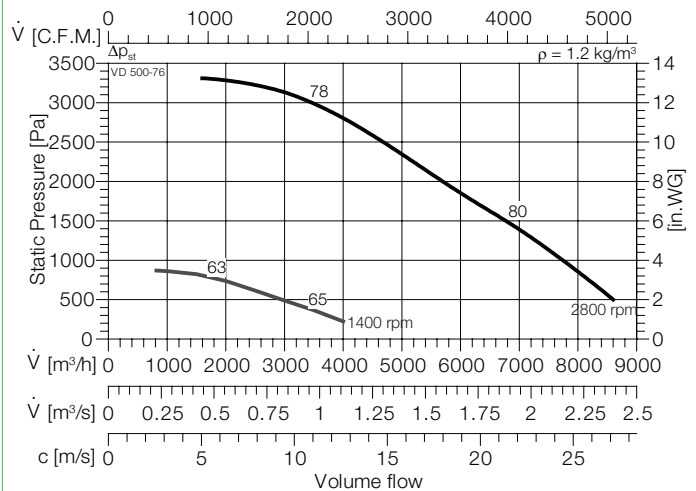
VE / VD 400-58



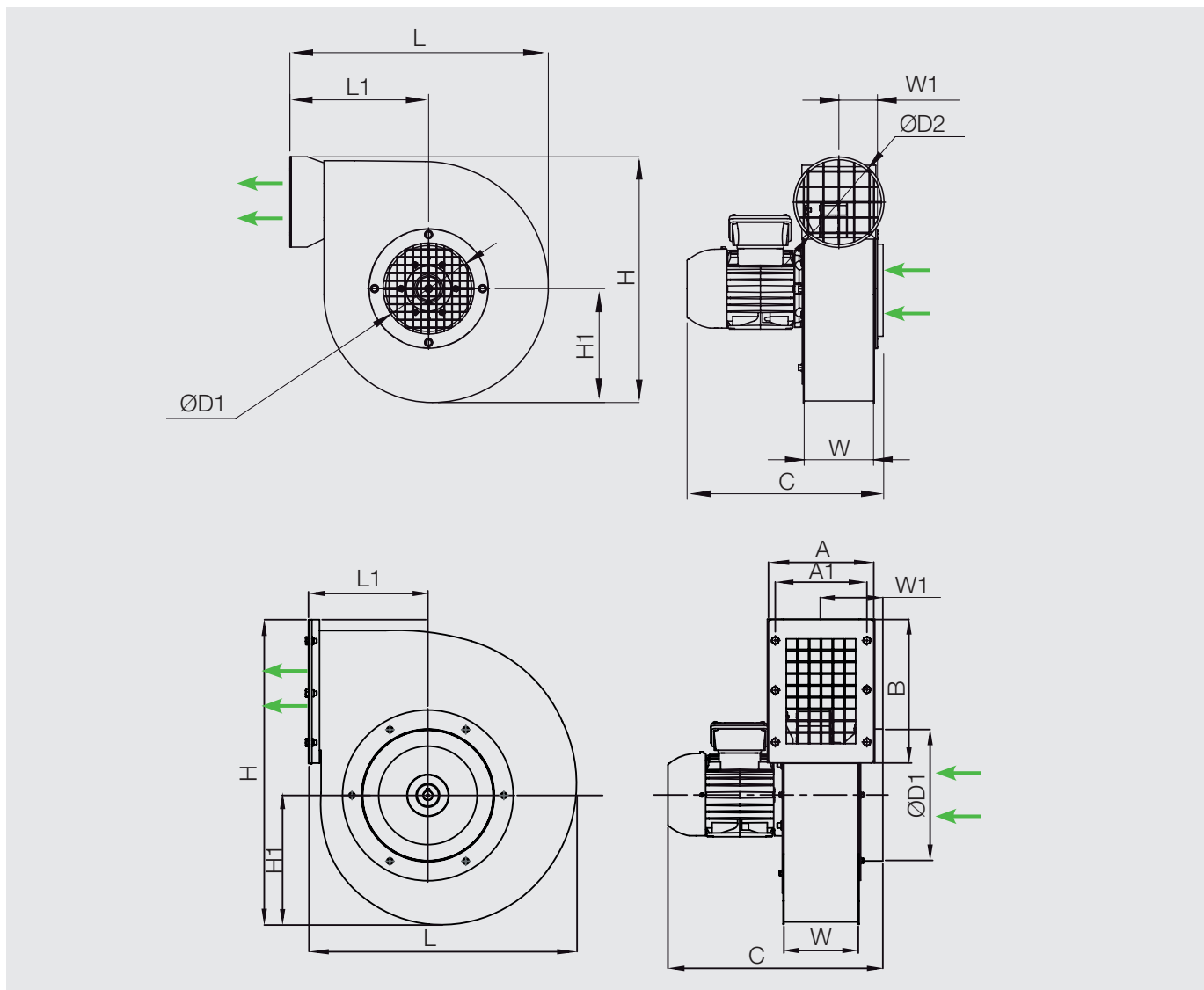
VD 450-67



VD 500-76



## Dimension

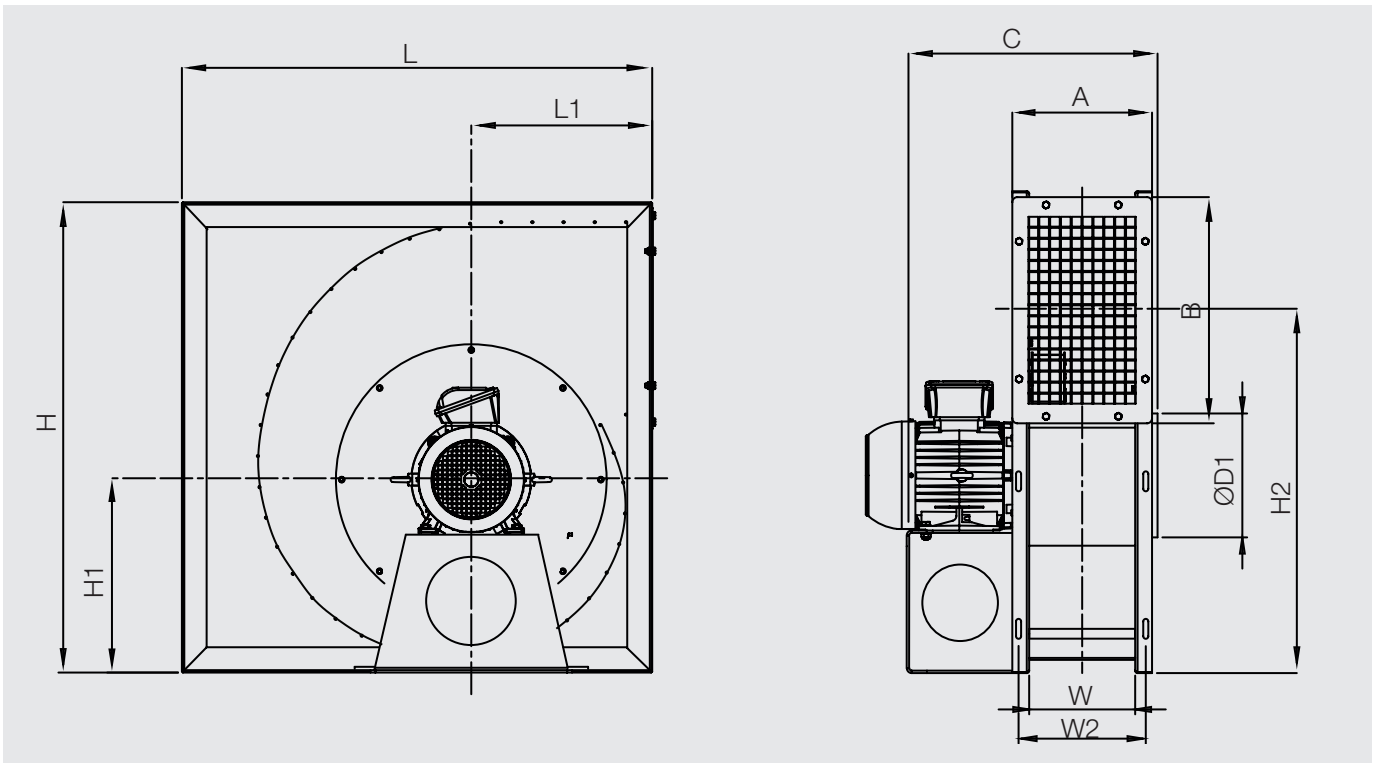


Model	A	A1	B	C	D1	D2	H	H1	L	L1	W	W1
-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
VE / VD 300-13	-	-	-	330	160	159	433	201	455	244	122	68
VE / VD 300-18	-	-	-	330	160	159	433	201	455	244	122	68
VE / VD 300-21	-	-	-	353	160	159	433	201	455	244	122	68
VE / VD 320-30	250	230	278	479	203	-	597	267	577	278	196	126

Note: 1) Hose reel and fan unit can be of integrated or split type

2) We reserve the right to alter measurements without notice in case of technical improvements.

## Dimension



Model	A	B	C	D1	D2	H	H1	H2	L	L1	W	W2
-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
VE / VD 380-47	250	348	479	359	-	750	321	576	750	315	196	240
VD 400-58	270	380	532	400	-	783	342	596	783	339	200	244
VD 450-67	280	420	570	450	-	882	372	669	882	358	210	254
VD 500-76	290	460	606	500	-	980	402	741	980	377	220	264

Note: 1) Hose reel and fan unit are of spilt type

2) We reserve the right to alter measurements without notice in case of technical improvements.

## Vehicle Exhaust Hose - EH

### Design:

- › special plastic-profile supporting spiral
- › wall thickness approx. 0.4mm (~0.015 in)
- › fabric-reinforced tape; wall: EPDM / PP coated fabric

### Application:

- › flexible hose / ducting for hot gases
- › engine test bench, exhaust gas measurement
- › vehicle/ car gas exhaust system, gas extraction: hose reel, slotted floor channel, underfloor extraction system

### Properties:

- › crush resistant
- › fabric reinforced
- › vibration resistant
- › conforms to RoHS guideline
- › highly flexible + compressible
- › good resistance to chemicals
- › protected, flow-optimizing exterior folds
- › exhaust gas temperatures to 200°C(~390°F)

EH Hose Standard Color: Black

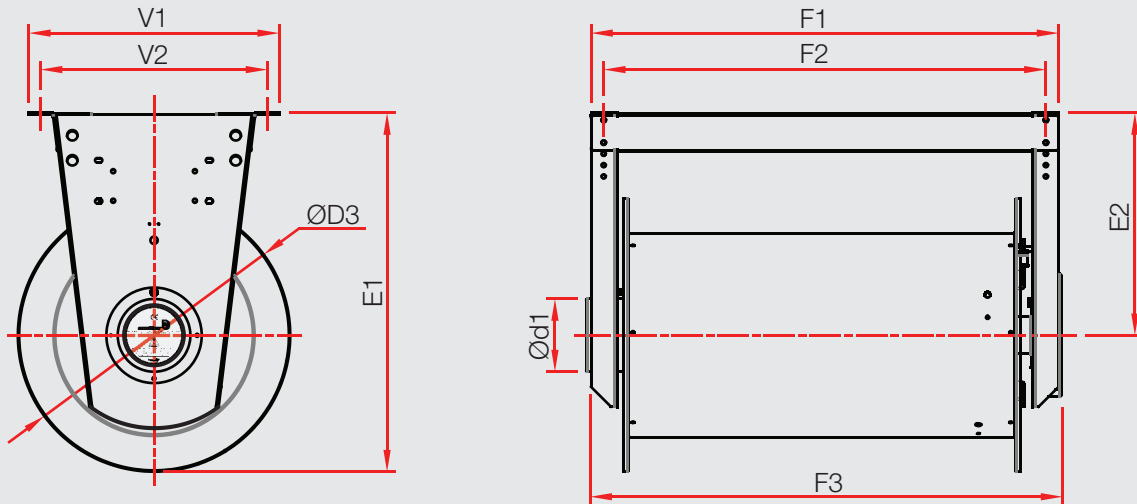


Size	Inner Dia.	Outer Dia.	Vacuum	Bending Radius	Weight kg / m	Length m
mm	mm	mm	Bar	mm		
100	100~102	119	0.050	71	0.71	5, 6, 7.5, 10, 12.5, 15
125	125~127	144	0.035	89	0.87	5, 6, 7.5, 10, 12.5, 15
150	150~152	169	0.030	106	1.04	5, 6, 7.5, 10, 12.5, 15
200	200~203	220	0.010	143	1.37	5, 6, 7.5, 10, 12.5

We reserve the right to alter measurements without notice in case of technical improvements.

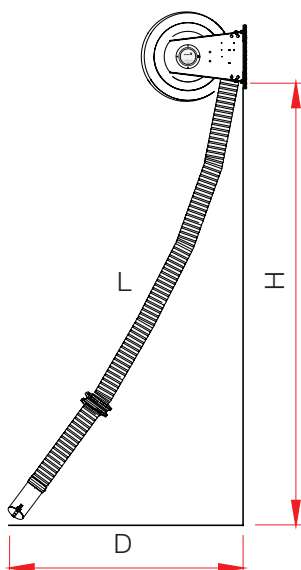
## Vehicle Exhaust Hose Reel

### Spring operated exhaust reel - VHS Series



Model	d1	D3	E1	E2	F1	F2	F3	V1	V2
-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
VHS 450	160	600	789	489	630	574	645	552	500
VHS 650	160	600	789	489	830	774	845	552	500
VHS 850	160	600	789	489	1030	974	1045	552	500
VHS 1050	160	600	789	489	1230	1174	1245	552	500
VHS 1050-200	200	760	977	597	1230	1174	1245	578	525

### Hose Reel Reach and Mounting Height

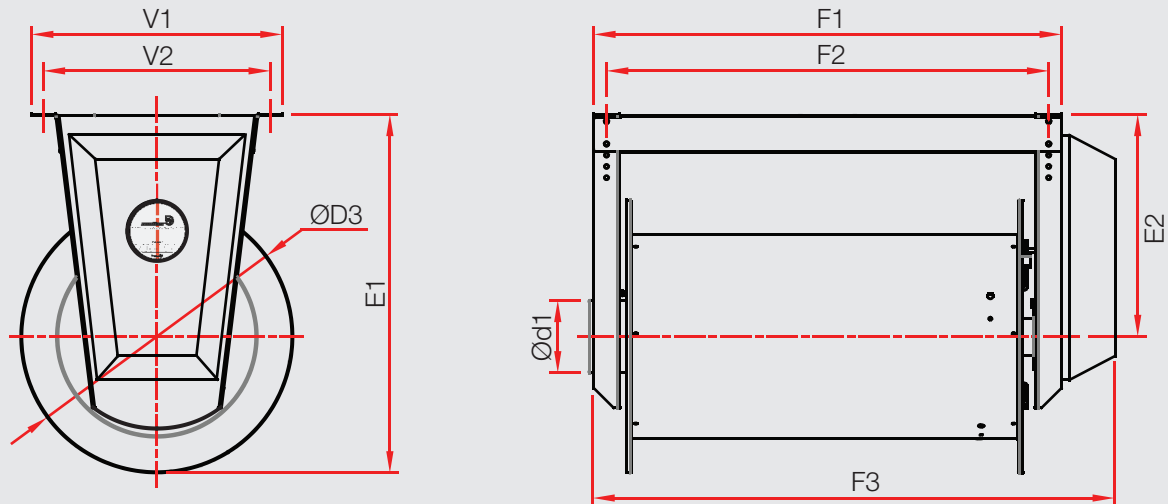


Mounting Height	Hose Length	Max. Reach	Hose Length	Max. Reach
H	L	D	L	D
[m]	[m]	[m]	[m]	[m]
3	7.5	6.2	-	-
3.5	7.5	5.9	10	8.5
4	7.5	5.5	10	8.3
4.5	7.5	5.2	10	8.0
5	7.5	4.7	10	7.7
5.5	-	-	10	7.4

We reserve the right to alter measurements without notice in case of technical improvements.

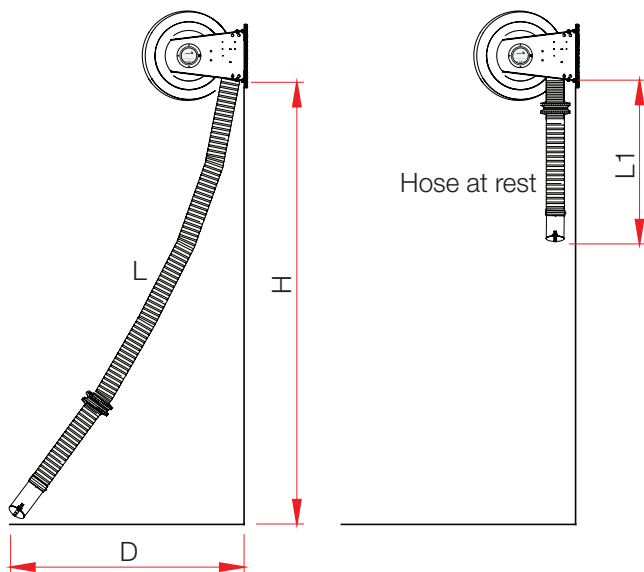
## Vehicle Exhaust Hose Reel

### Motorized hose reel - VHM Series



Model	d1	D3	E1	E2	F1	F2	F3	V1	V2
-	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]	[mm]
VHM 850	160	600	789	489	1030	974	1313	552	500
VHM 1050	160	600	789	489	1230	1174	1513	552	500
VHM 1050-200	200	760	977	597	1230	1174	1513	578	525
VHM 1250-200	200	760	977	597	1430	1374	1713	578	525

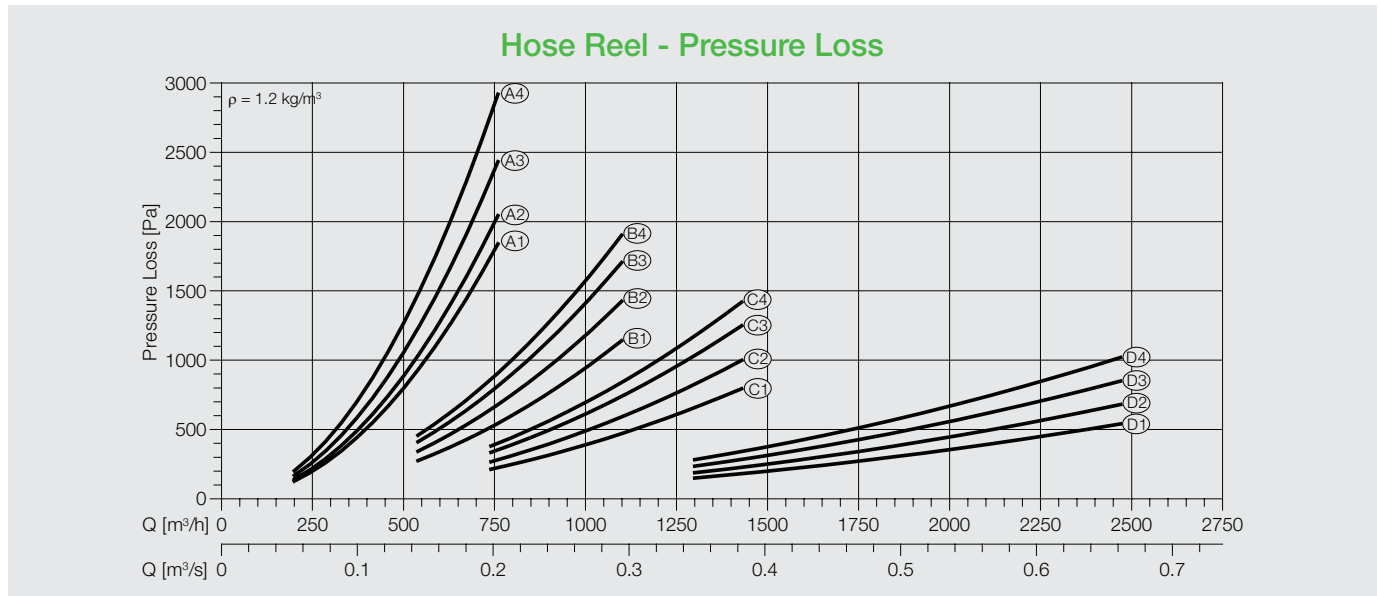
### Hose Reel Reach and Mounting Height



Mounting Height	Hose Length	Max. Reach	At Rest
H	L	D	L1
[m]	[m]	[m]	[m]
5	12.5	10.6	0
5.5		10.3	
6		10.0	
6.5		9.7	
7		9.4	
5.5	15	12.9	2.5
6		12.6	
6.5		12.3	
7		12.1	
7.5		11.8	

We reserve the right to alter measurements without notice in case of technical improvements.

## General Guidelines



Nr	Hose Diameter	Length
-	[mm]	[m]
A1	Ø 100	7.5
A2	Ø 100	10
A3	Ø 100	12.5
A4	Ø 100	15
B1	Ø 125	7.5
B2	Ø 125	10
B3	Ø 125	12.5
B4	Ø 125	15
C1	Ø 150	7.5
C2	Ø 150	10
C3	Ø 150	12.5
C4	Ø 150	15
D1	Ø 200	7.5
D2	Ø 200	10
D3	Ø 200	12.5
D4	Ø 200	15

Vehicle Serviced	Airflow	Hose Diameter
-	[CMH]	[mm]
Motorcycles / Automobile	450 ~ 550	Ø 100
Trucks (Public works, Rental fleets, etc.)	825 ~ 950	Ø 125
Heavy Duty Trucks	1050 ~ 1400	Ø 150
Off-Road (Constr., Compressor Tests, etc.)	1650 ~ 2400	Ø 200

We reserve the right to alter measurements without notice in case of technical improvements.

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