



Big Dutchman®



Wall Fans

High air performance and low energy consumption

Wall fans – the right solution for every type of barn!

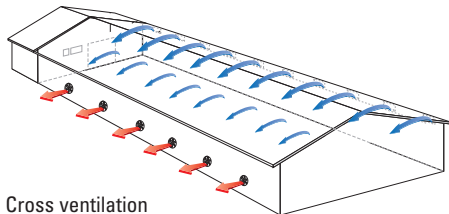
The wall fans offered by Big Dutchman are very versatile, due to the following characteristics:

- ✓ high air performance
- ✓ low power consumption
- ✓ low maintenance costs
- ✓ corrosion resistance
- ✓ rigidity

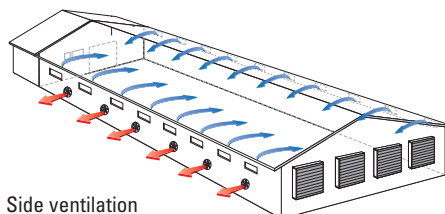
As Big Dutchman can offer a wide range of different fan types, the requirements of any house can be met, and fans can be

selected to fit the respective ventilation concept. For cross and side ventilation, axial fans are often the best choice. For longitudinal ventilation in long barns and for tunnel ventilation, AirMaster fans are recommended. Their air performance is larger, allowing them to draw air longitudinally and at a high speed through the house. CombiTunnel ventilation is best used in climate zones with large temperature fluctuations – summer/winter

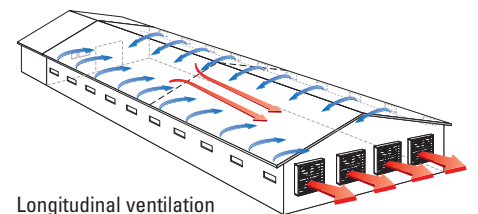
or day/night temperatures. If exhaust air is extracted via individual chimneys in the roof, AirMaster fans in the gable can be switched on for additional ventilation on hot summer days. Please let our experts advise you to find the ideal fan for your house!



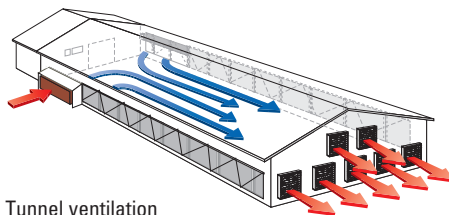
Cross ventilation



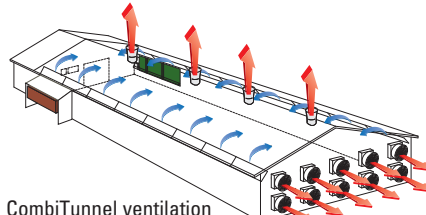
Side ventilation



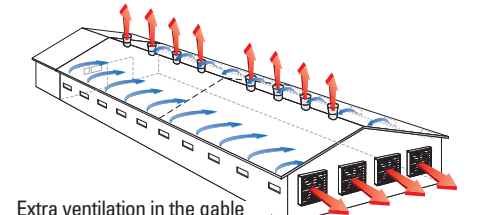
Longitudinal ventilation



Tunnel ventilation



CombiTunnel ventilation



Extra ventilation in the gable

Axial fans

Excellent adjustability, low power consumption

Axial fans are ideally suited for incorporation into walls. Their frame has an aerodynamic shape and is made of stable plastic or corrosion-resistant metal. The blades are made of aluminium in a moulded diecasting process and are exceptionally efficient. Big Dutchman offers so-called FC, FF and

FN fans. The new generation (FF and FN fans) has serrated blades, imitating the wings of an owl during its silent flight (bionics). FF and FN fans therefore consume even less power; they are extremely resistant to pressure and operate at a low noise level.

Advantages

- ✓ excellent adjustability;
- ✓ low energy consumption, especially by the FF and FN fans;
- ✓ low noise level;
- ✓ quick and easy assembly;
- ✓ high corrosion resistance;
- ✓ long service life.



Fan of the FC series



Fan of the FF series



Fan of the FN series

Technical data axial fans

Description details

FC035-4EQ	FC = standard fan	4 = 4-pole; 6 = 6-pole	E = single-phase	
FF063-6DQ	FF = sickle-shaped fan	35 = impeller diameter (cm)	D = three-phase	Q = wall installation
FN091-6DQ	FN = sickle-shaped fan, bionic			

Technical data 1 ~ 230 V, 50 Hz

	FC035-4EQ	FC040-4EQ	FC045-4EQ	FC050-4EQ	FF056-6EQ	FF063-6EQ	FC071-6EQ	FN080-6EQ	FF091-6EQ
Code no.	60-47-9135	60-47-9141	60-47-9145	60-47-9150	60-47-9158	60-47-7904	60-47-9171	60-47-9181	60-47-7908
Power consumption (watts)	160	260	380	510	400	520	890	1300	940
Nominal current (amperes)	0.8	1.2	1.9	2.3	1.9	2.5	4.1	6.2	4.2
Noise level (dB(A))*	44	49	53	51	49	46	54	59	49

Technical data 3 ~ 400 V, 50 Hz

	FC045-4DQ	FC050-4DQ	FC056-6DQ	FF063-6DQ	FC071-6DQ	FC080-6DQ	FF091-6DQ	FN091-6DQ
Code no.	60-47-9645	60-47-9650	60-47-9656	60-47-7905	60-47-9671	60-47-9680	60-47-7909	60-50-0216
Power consumption (watts)	360	530	360	540	890	1350	920	1950
Nominal current (amperes)	0.8	1.1	0.7	1.3	1.8	2.7	1.9	4.0
Noise level (dB(A))*	53	53	48	46	55	55	50	53

* The noise level was measured free-blowing at a 45° angle from the centre of the fan at a distance of 7 m (at 0 Pa pressure increase).

Air performance data*

Single-phase power supply 230 V, 50 Hz: capacity (m³/h) / spec. output (W/1000 m³/h)

Type / negative pressure	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa	50 Pa	60 Pa
FC035-4EQ	3470 / 45.5	3320 / 48.8	3180 / 51.8	3050 / 54.7	2920 / 58.2	2780 / 61.1	2530 / 67.3
FC040-4EQ	4660 / 46.1	4540 / 48.0	4410 / 51.0	4290 / 52.9	4160 / 55.7	4010 / 58.6	3850 / 62.3
FC045-4EQ	6350 / 53.5	6260 / 55.9	6160 / 56.0	6040 / 61.5	5830 / 65.1	5570 / 69.1	5370 / 73.1
FC050-4EQ	7990 / 53.8	7800 / 56.4	7620 / 58.4	7430 / 61.2	7240 / 63.5	7030 / 68.2	6800 / 71.3
FF056-6EQ	9470 / 41.1	9210 / 42.8	8910 / 44.9	8600 / 47.0	8220 / 49.8	7840 / 52.2	7230 / 56.7
FF063-6EQ	12110 / 40.4	11700 / 42.7	11280 / 45.2	10830 / 47.5	10350 / 50.2	9810 / 53.0	9100 / 57.1
FC071-6EQ	16080 / 44.1	15650 / 46.6	15180 / 49.4	14670 / 53.1	14130 / 56.2	13560 / 60.1	13020 / 62.9
FN080-6EQ	19630 / 50.1	19250 / 52.9	18860 / 55.1	18360 / 57.7	17850 / 60.5	17310 / 64.1	16770 / 67.6
FF091-6EQ	22760 / 38.4	21660 / 41.1	20600 / 43.6	19590 / 46.4	18460 / 49.5	17460 / 52.9	16470 / 56.1

Three-phase power supply 400 V, 50 Hz: capacity (m³/h) / spec. output (W/1000 m³/h)

Type / negative pressure	0 Pa	10 Pa	20 Pa	30 Pa	40 Pa	50 Pa	60 Pa
FC045-4DQ	6330 / 50.5	6200 / 51.6	6070 / 52.7	5920 / 54.5	5760 / 56.4	5580 / 59.1	5400 / 62.9
FC050-4DQ	8400 / 47.6	8230 / 50.7	8050 / 52.4	7890 / 54.5	7720 / 56.9	7530 / 59.7	7330 / 62.7
FC056-6DQ	8780 / 36.2	8450 / 38.4	8130 / 41.2	7770 / 43.7	7400 / 47.0	7000 / 50.2	6280 / 57.3
FF063-6DQ	12300 / 38.6	11920 / 41.1	11550 / 43.3	11160 / 45.7	10740 / 49.3	10250 / 51.7	9690 / 54.7
FC071-6DQ	16520 / 45.4	16110 / 47.1	15690 / 49.7	15250 / 52.4	14790 / 55.1	14300 / 57.3	13780 / 60.2
FC080-6DQ	23060 / 52.0	22670 / 53.8	22270 / 55.9	21740 / 58.6	21190 / 61.3	20640 / 63.4	20080 / 65.7
FF091-6DQ	23450 / 35.4	22640 / 37.5	21810 / 40.1	20990 / 42.4	19950 / 45.1	18960 / 47.9	18010 / 50.5
FN091-6DQ	27430 / 49.9	26850 / 51.9	26280 / 55.1	25680 / 57.8	25030 / 60.7	24380 / 63.9	23740 / 68.6

* The capacity was measured without wire mesh guard and at an air density of 1.2 kg/m³.

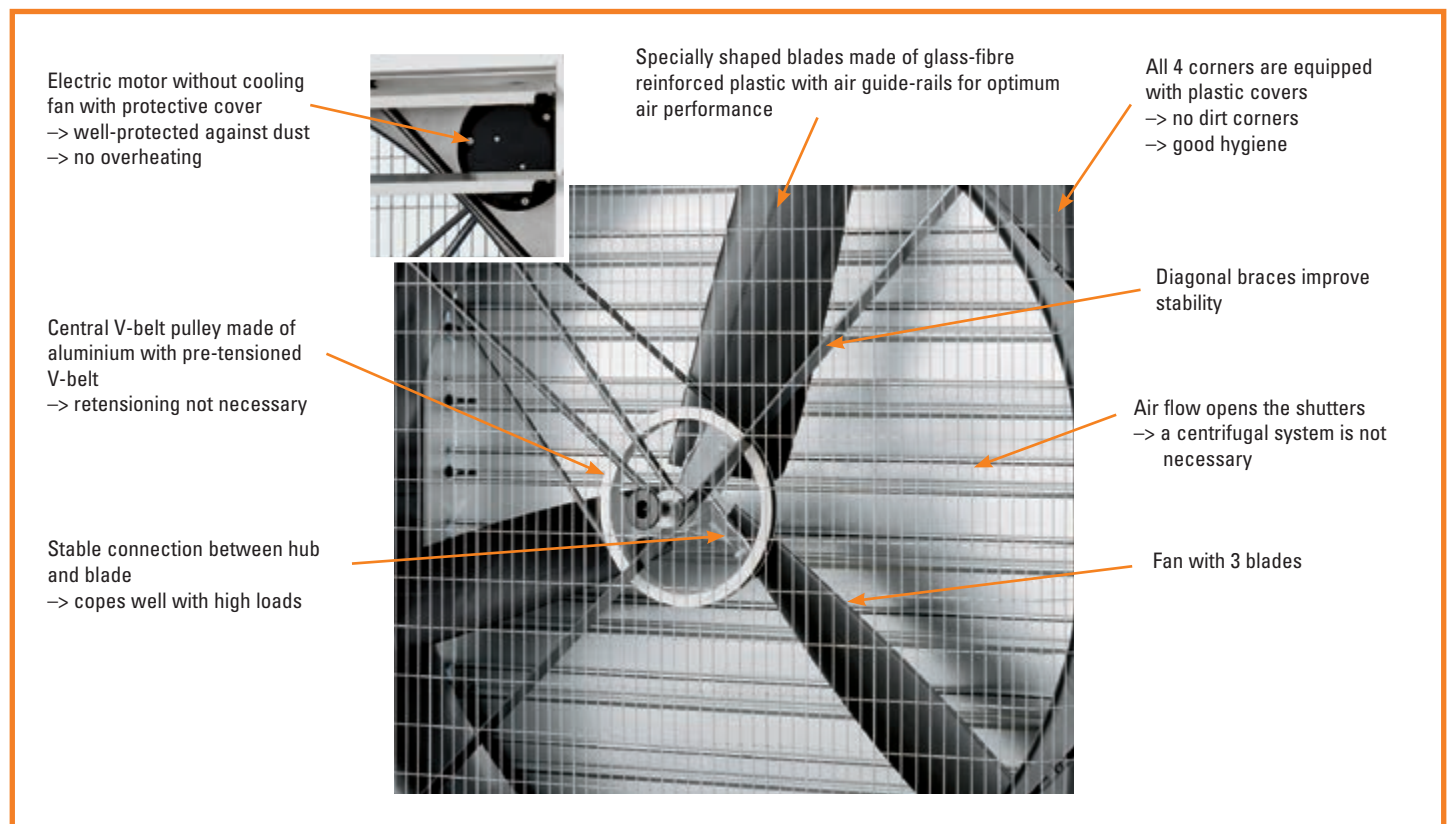
The motors are fabricated according to ingress protection rating IP 54 (dust-proof and water-proof). All listed fans 1 ~ 230 V and 3 ~ 400 V can be controlled electronically or by a transformer. On request, the fans are also available with frequency control and/or with other supply voltages and/or 60 Hz.

AirMaster V130 and VC130

High air performance, low costs

The AirMaster fans of the V130/VC130 series are usually mounted in the gable for tunnel ventilation. Their metal housing has a long-lasting zinc-aluminium coating. The specially shaped blades are made of glass-fibre reinforced plastic. Air guide-rails on every blade ensure a large air capacity combined with a low resistance and thus low energy consumption. The air flow opens the shutters, which are then kept open by means of a balancing weight. When the fan stops, the shutters close automatically and are locked magnetically. The V-belt pulley is made of aluminium and is manufactured as one piece

together with the blade hub by diecasting. The V-belt is pre-tensioned, i.e. further tensioning is not necessary. We use high-quality motors with a large voltage range (motor protection IP 55, approved for UL/CSA). The motors are completely closed; a separate cooling fan is not necessary. This means there is no danger of dust entering the motor or of overheating.

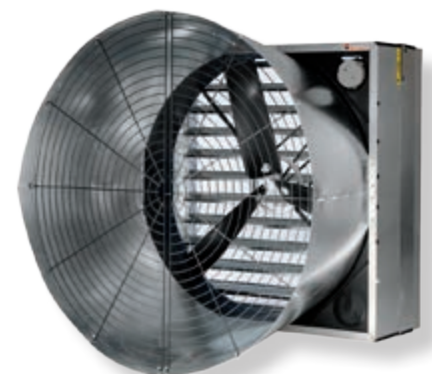


Fans with cone require even less power while also having a higher air perfor-

mance. They need slightly more space in the gable.

Advantages

- ✓ optimised aerodynamics at the air admission and air exit sides for a high air performance;
- ✓ specially shaped blades ensure optimum operation, thus reducing electricity costs;
- ✓ low noise level;
- ✓ the air flow pressure opens the shutters, which stay open thanks to balancing weights, i.e. there is little air resistance;
- ✓ stable and robust design;
- ✓ easy to install without external assistance.



VC130 – AirMaster with cone

AirMaster V140 and VC140

Very high air performance, high stability

The AirMaster V140 fans produce a high air flow rate where there is much resistance. They are therefore a good choice if the housing equipment in barns with tunnel ventilation causes high resistance, e.g. in houses with multi-tiered cage systems. An unobstructed air flow is not possible in such houses, unlike in broiler houses.

The V140 meets the same exacting requirements regarding quality of the material, aerodynamics and workmanship as the V130. This includes, among other characteristics, that the fan is operated by a high-quality and powerful electric motor which is well-protected against dust.

The connection between hub and the six blades is very stable and ensures secure running of the fan, even at a negative pressure of 100 Pa or higher. The air flow opens the shutters, similar to the V130. The shutters are then kept open by means of a balancing weight. When the fan stops, the shutters close and are locked magnetically.



Technical data AirMaster 3 ~ 400 V, 50 Hz

Description details

V130-3-1.5 PS-E15 V = fan without cone

130/140 = impeller diameter

3/6 = number of blades

VC 140-6-2.0 PS-E15 VC = fan with cone

1.5/2.0 = motor voltage

E 15 = complies with the Ecodesign Directive

	V130-3 1.0 PS E15	V130-3-1.5 PS E15	VC130-3-1.0 PS E15	VC130-3-1.5 PS E15	V140-6-2.0 PS E15	VC140-6-2.0 PS E15
Code no.	60-25-4509	60-25-4501	60-25-4565	60-25-4561	60-25-5100	60-25-5600
Power consumption (watts)	1100	1500	1100	1500	1550	1500
Nominal current (amperes)	2.2	2.8	2.2	2.8	3.2	3.1
Noise level (dB(A))*	61	64	61	64	63	66

* noise level calculated at a distance of 7 m

Type	Capacity in m ³ /h / spec. output in W/1000 m ³ /h							
	Negative pressure	0 Pa	20 Pa	30 Pa	40 Pa	60 Pa	80 Pa	100 Pa
V130-3-1.0 PS E15		40400 / 27.5	36100 / 32.4	33100 / 35.8	29900 / 40.3			
V130-3-1.5 PS E15		44700 / 33.6	40500 / 38.8	38400 / 41.4	36000 / 44.4	29300 / 54.8		
VC130-3-1.0 PS E15		44500 / 24.6	40400 / 28.6	37800 / 31.5	35400 / 34.1			
VC130-3-1.5 PS E15		49000 / 29.9	45200 / 33.9	43100 / 36.4	40700 / 39.1	35900 / 45.7		
V140-6-2.0 PS E15		46200 / 33.5	43700 / 37.5	42400 / 39.7	41100 / 42.1	37700 / 50.3	34200 / 58.5	29600 / 69.1
VC140-6-2.0 PS E15		47900 / 31.1	45400 / 35.5	44100 / 38.0	42800 / 40.5	39800 / 46.5	35700 / 55.0	30900 / 65.8

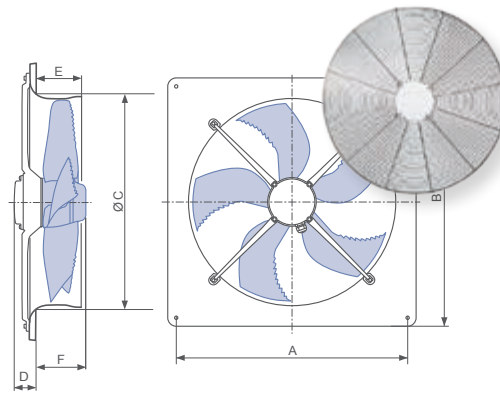
Motors with other voltages, frequencies (also for non-EU countries) and with and without speed control are available upon request.

Weight: V130: 80 kg; VC130: 99 kg; V140: 94 kg; VC140: 119 kg

All types are also available unassembled (different code numbers).

Dimensions of the axial fans

Ø Impeller in cm	A	B	C in mm	D	E	F
35	435	485	375	86	75	89
40	490	540	420	91	88	102
45	535	575	480	75	96	123
50	615	655	528	77	104	141
56	675	725	589	60	119	138
63	750	805	664	64	130	154
71	810	850	763	44	150	202
80	910	970	869	34	193	252
91	1010	1070	977	48	190	197



A wire mesh guard is required if the fan is installed in an accessible location.

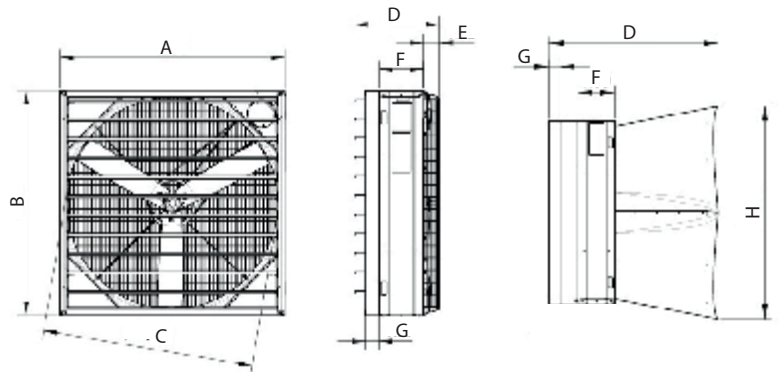


Shutters made of PVC – adjust automatically, close when the fan stops

Dimensions of the AirMaster fans

Type	A	B	C	D	E	F	G	H
	in mm							
V130	1380	1380	1284	522	95	275	85	-
VC130	1380	1380	1284	1275	-	275	85	1600
V140	1480	1480	1375	548	95	295	85	-
VC140	1480	1480	1375	1340	-	295	85	1660

If used in the European Union, fans must carry the CE mark of conformity. This means that a wire mesh guard (on the shutter side where the fan is installed at a height of less than 2.70 m) is required.



Light trap for AirMaster fans

Big Dutchman has two options available to darken barns. The LF50 light trap reduces the amount of light passing through the fan to a minimum and is thus especially suited for rearing and breeder houses. The air performance is reduced by approx. 12 percent.

PerforMacs is ideally suited for broiler and layer houses. It has been optimised aerodynamically, reducing the air performance by only approx. 10 percent. The segments of both light traps are made of plastic which makes them extremely durable and easy to clean.



LF50 light trap for V130



PerforMacs for V130 and V140



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