

CLEARFLOW CF

Roof Mounted Discharge
Centrifugal Fan

CLEARFLOW CF

Product Overview

- 5 standard sizes from 315mm to 500mm
- Air volume flow rates up to 2.66 m³/s
- Static pressures up to 618 Pa
- Suitable for operating temperatures up to +60°C
- Can be mounted at angles of up to 30°
- Available in **AC**



The Clearflow CF range of vertical discharge centrifugal roof fans incorporate advanced backward curved impellers, with three dimensional profiled blades.

Intelligent Design

Vertical discharge of air, projects odours away from potential occupied areas.

Easy Installation

Can be mounted at angles of up to 30° which means the fans can be fitted directly to pitched roofs. Spigot is on the underside of the unit and can be fitted directly to the main duct.

Space saving

External roof mounting outside of the building is ideal where space is a premium. Bird guard fitted as standard to stop damage by wildlife.

Efficient Performance

Energy cost savings are achieved by providing the highest efficiency at operating point with virtually no air, performance or redirecting losses thanks to the unique impeller blade geometry.

Weather Resistance

Wind guard fitted as standard to reduce noise, and draughts entering the duct. Easily removable for cleaning and maintenance.

Controllability

A range of transformer voltage controllers used to provide five speed step control of single phase or three phase motors. Reduced fan speed can provide significant cost-savings through lower energy consumption in both mechanical energy of motors and also on the conditioning of replacement air.

Warranty

Each CF has a 12 month warranty.

Construction

The Clearflow CF all metal fan casing provides a long lasting and robust construction. The casings are manufactured from pre-galvanised sheet steel.

Motor

Units have an AC external rotor motor fitted as standard. The motor contains sealed for life bearings. All motors are suitable for use in ambient air conditions up to +60°C.

Impeller

Free running impeller with 7 backwards-curved, fluted blades made of high-performance composite material providing high volume flow rates, high efficiency and low acoustic power levels.

Typical Applications

- Industrial
- Commercial Kitchens and Catering
- Hospitals
- Bakeries
- Forges and Foundries

Contents

Page	Information
3	Performance Range Curves
4	Performance, SFP & Electrical Data
6	Sound Data
8	Dimensional Data
9	EcoDesign 1253/2014
10	Accessories

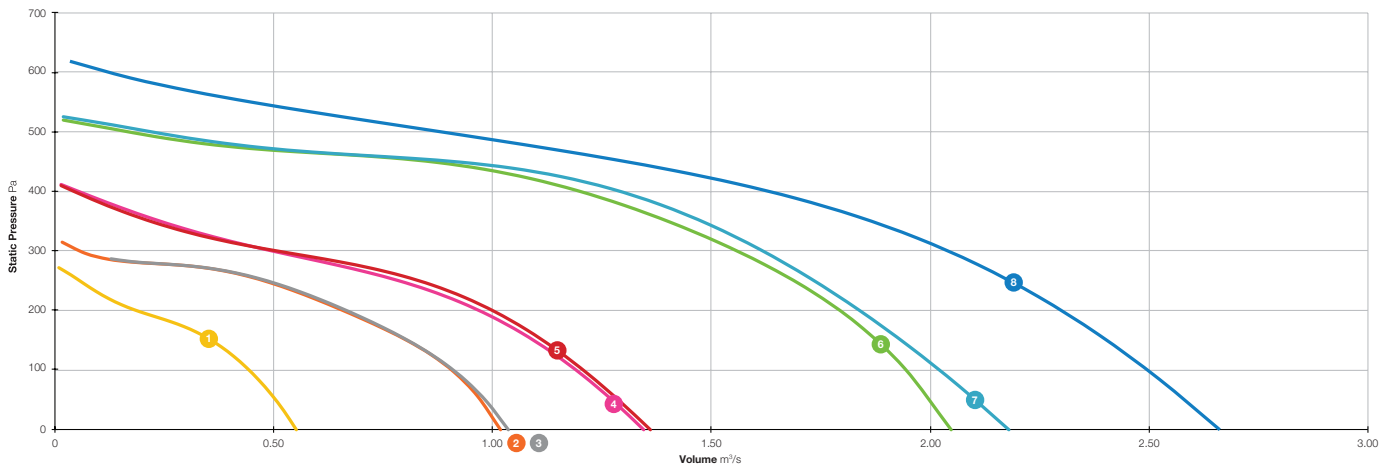
Product Coding

Code	Reference
CF	Product Range
315	Diameter (315/350/400...)
/	
4	Number of Poles (2/4/6)
-	
2	Voltage Supply (Single Phase / Three Phase)
AC	Motor Type (AC/EC)
A - Z	Additional Coding (A - Z) Product Variants
e.g.	CF315 / 4 - 2AC

CLEARFLOW CF



Performance Range Curves



- 1 CF315 / 4-1AC
- 2 CF350 / 4-1AC
- 3 CF350 / 4-3AC

- 4 CF400 / 4-1AC
- 5 CF400 / 4-3AC
- 6 CF450 / 4-1AC

- 7 CF450 / 4-3AC
- 8 CF500 / 4-3AC

CLEARFLOW CF



Performance, SFP & Electrical Data

Single Phase 220V to 240V / 50Hz

Product Code	Speed r/min	Airflow	Airflow m ³ /s @ Static Pressure Pa												At Best Efficiency Point		Electrical Data		dBA @ 3m	
			0	25	50	75	100	150	200	250	300	350	400	500	Overall Eff %	Input kW	Peak Amps			
CF315/4-1AC	1390	m ³ /s	0.552	0.529	0.505	0.476	0.444	0.358	0.188	0.058	-	-	-	-	28.2	0.188	1.04	Inlet	47	
		W/(L/s)	0.37	0.39	0.41	0.43	0.46	0.54	0.85	2.31	-	-	-	-				Outlet	49	
	1330	m ³ /s	0.519	0.491	0.463	0.433	0.399	0.306	0.157	0.044	-	-	-	-	30.2	0.147	0.82	Inlet	46	
		W/(L/s)	0.33	0.35	0.37	0.40	0.42	0.50	0.77	2.23	-	-	-	-				Outlet	47	
	1265	m ³ /s	0.455	0.426	0.394	0.359	0.319	0.218	0.102	-	-	-	-	-	25.0	0.130	0.78	Inlet	45	
		W/(L/s)	0.36	0.39	0.41	0.44	0.48	0.60	0.99	-	-	-	-	-				Outlet	45	
1160	m ³ /s	0.351	0.306	0.262	0.226	0.194	0.122	0.042	-	-	-	-	-	18.4	0.105	0.66	Inlet	43		
	W/(L/s)	0.40	0.46	0.52	0.57	0.62	0.82	1.95	-	-	-	-	-				Outlet	44		
CF350/4-1AC	1400	m ³ /s	1.018	0.997	0.973	0.943	0.907	0.804	0.659	0.478	0.056	-	-	-	36.3	0.359	1.96	Inlet	52	
		W/(L/s)	0.36	0.37	0.38	0.40	0.42	0.47	0.56	0.72	4.61	-	-	-				Outlet	52	
	1335	m ³ /s	0.962	0.933	0.900	0.861	0.815	0.702	0.560	0.362	0.032	-	-	-	37.8	0.289	1.48	Inlet	51	
		W/(L/s)	0.31	0.33	0.34	0.36	0.39	0.45	0.53	0.71	5.77	-	-	-				Outlet	51	
	1240	m ³ /s	0.874	0.832	0.773	0.700	0.629	0.508	0.389	0.178	-	-	-	-	31.5	0.243	1.42	Inlet	49	
		W/(L/s)	0.30	0.33	0.36	0.41	0.45	0.53	0.64	1.09	-	-	-	-				Outlet	48	
1080	m ³ /s	0.598	0.539	0.436	0.369	0.320	0.239	0.158	0.017	-	-	-	-	19.3	0.184	1.09	Inlet	50		
	W/(L/s)	0.34	0.39	0.48	0.56	0.63	0.79	1.10	8.04	-	-	-	-				Outlet	46		
CF400/4-1AC	1300	m ³ /s	1.344	1.309	1.272	1.233	1.190	1.093	0.969	0.785	0.496	0.240	0.054	-	37.9	0.518	2.57	Inlet	54	
		W/(L/s)	0.40	0.41	0.42	0.44	0.46	0.50	0.56	0.66	0.88	1.56	6.27	-				Outlet	53	
	1190	m ³ /s	1.157	1.117	1.071	1.020	0.962	0.824	0.651	0.450	0.243	0.076	-	-	31.2	0.402	2.70	Inlet	52	
		W/(L/s)	0.38	0.40	0.42	0.44	0.47	0.54	0.65	0.82	1.30	3.71	-	-				Outlet	51	
	1085	m ³ /s	0.984	0.930	0.869	0.799	0.724	0.565	0.406	0.249	0.102	-	-	-	25.9	0.321	2.64	Inlet	49	
		W/(L/s)	0.37	0.39	0.42	0.46	0.50	0.61	0.77	1.12	2.41	-	-	-				Outlet	49	
940	m ³ /s	0.757	0.682	0.588	0.492	0.410	0.279	0.169	0.060	-	-	-	-	17.8	0.235	2.42	Inlet	49		
	W/(L/s)	0.35	0.38	0.45	0.53	0.62	0.84	1.27	3.29	-	-	-	-				Outlet	45		
CF450/4-1AC	1390	m ³ /s	2.046	2.024	1.999	1.973	1.944	1.876	1.793	1.688	1.558	1.400	1.201	0.171	42.7	1.125	5.65	Inlet	58	
		W/(L/s)	0.53	0.54	0.55	0.56	0.58	0.61	0.65	0.71	0.77	0.84	0.94	4.20				Outlet	62	
	1310	m ³ /s	1.952	1.917	1.878	1.837	1.791	1.690	1.573	1.440	1.288	1.107	0.861	0.052	40.1	0.958	4.59	Inlet	56	
		W/(L/s)	0.49	0.50	0.52	0.53	0.55	0.59	0.64	0.70	0.78	0.87	1.03	10.93				Outlet	59	
	1200	m ³ /s	1.638	1.578	1.515	1.449	1.379	1.228	1.069	0.912	0.759	0.599	0.411	-	31.2	0.712	3.87	Inlet	55	
		W/(L/s)	0.49	0.51	0.53	0.56	0.59	0.66	0.75	0.85	0.97	1.14	1.48	-				Outlet	57	
1010	m ³ /s	1.206	1.145	1.066	0.965	0.855	0.668	0.523	0.398	0.281	0.162	0.033	-	19.6	0.526	2.84	Inlet	54		
	W/(L/s)	0.47	0.50	0.54	0.60	0.67	0.85	1.04	1.29	1.71	2.77	12.45	-				Outlet	56		

Data provided is at standard air density of 1.2 kg/m³.

Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: C.

Peak Amps @ 230V / 1PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

CLEARFLOW CF



Performance, SFP & Electrical Data

Three Phase 380V to 415V / 50Hz

Product Code	Speed r/min	Airflow	Airflow m³/s @ Static Pressure Pa												At Best Efficiency Point		Electrical Data		dBA @ 3m	
			0	25	50	75	100	150	200	250	300	350	400	500	Overall Eff %	Input kW	Peak Amps	Δ / Y		
CF350/4-3AC	1390	m³/s	1.036	1.011	0.983	0.949	0.910	0.805	0.665	0.481	-	-	-	-	36.8	0.355	0.89	5	Inlet	49
		W/(L/s)	0.35	0.36	0.37	0.39	0.41	0.47	0.56	0.70	-	-	-	-					Outlet	53
	1200	m³/s	0.891	0.854	0.810	0.758	0.697	0.554	0.376	0.105	-	-	-	-	29.8	0.276	0.56	4	Inlet	47
		W/(L/s)	0.32	0.34	0.37	0.40	0.43	0.52	0.69	1.87	-	-	-	-					Outlet	49
	1060	m³/s	0.761	0.718	0.660	0.588	0.507	0.340	0.144	-	-	-	-	-	22.3	0.234	0.49	3	Inlet	45
		W/(L/s)	0.32	0.34	0.38	0.43	0.49	0.67	1.34	-	-	-	-	-					Outlet	45
	895	m³/s	0.618	0.554	0.467	0.372	0.287	0.131	-	-	-	-	-	-	15.4	0.186	0.41	2	Inlet	41
		W/(L/s)	0.32	0.36	0.42	0.52	0.65	1.28	-	-	-	-	-	-					Outlet	39
CF400/4-3AC	1320	m³/s	1.359	1.323	1.286	1.247	1.206	1.114	0.999	0.831	0.507	0.218	0.044	-	38.9	0.531	1.20	5	Inlet	54
		W/(L/s)	0.40	0.41	0.43	0.44	0.46	0.50	0.56	0.64	0.87	1.54	6.90	-					Outlet	53
	1100	m³/s	1.098	1.059	1.014	0.964	0.906	0.748	0.507	0.279	0.118	-	-	-	32.1	0.338	1.05	4	Inlet	52
		W/(L/s)	0.32	0.34	0.36	0.39	0.42	0.49	0.63	0.93	1.92	-	-	-					Outlet	51
	975	m³/s	0.964	0.907	0.844	0.772	0.688	0.473	0.264	0.108	-	-	-	-	28.0	0.260	0.99	3	Inlet	49
		W/(L/s)	0.29	0.31	0.33	0.36	0.40	0.54	0.85	1.82	-	-	-	-					Outlet	49
	845	m³/s	0.806	0.739	0.657	0.556	0.441	0.238	0.081	-	-	-	-	-	23.1	0.188	0.92	2	Inlet	49
		W/(L/s)	0.25	0.28	0.31	0.36	0.44	0.72	1.88	-	-	-	-	-					Outlet	45
CF450/4-3AC	1390	m³/s	2.179	2.142	2.103	2.062	2.021	1.933	1.838	1.734	1.617	1.477	1.291	0.219	46.7	1.107	2.31	5	Inlet	57
		W/(L/s)	0.48	0.49	0.50	0.52	0.53	0.57	0.61	0.65	0.70	0.77	0.86	2.87					Outlet	63
	1200	m³/s	1.865	1.815	1.764	1.712	1.657	1.540	1.405	1.240	1.026	0.742	0.392	-	37.0	0.836	1.44	4	Inlet	47
		W/(L/s)	0.44	0.45	0.47	0.49	0.51	0.55	0.62	0.70	0.81	1.00	1.53	-					Outlet	51
	1055	m³/s	1.642	1.586	1.527	1.463	1.393	1.230	1.028	0.792	0.544	0.303	0.074	-	29.8	0.682	1.25	3	Inlet	51
		W/(L/s)	0.44	0.46	0.48	0.51	0.53	0.60	0.69	0.84	1.10	1.71	6.12	-					Outlet	54
	900	m³/s	1.378	1.300	1.224	1.143	1.048	0.805	0.563	0.352	0.149	-	-	-	22.4	0.536	0.96	2	Inlet	54
		W/(L/s)	0.38	0.41	0.44	0.47	0.52	0.67	0.91	1.32	2.77	-	-	-					Outlet	58
CF500/4-3AC	1315	m³/s	2.660	2.621	2.581	2.539	2.495	2.402	2.299	2.180	2.040	1.864	1.630	0.880	44.5	1.452	3.01	5	Inlet	58
		W/(L/s)	0.55	0.56	0.57	0.59	0.60	0.63	0.67	0.71	0.76	0.82	0.90	1.30					Outlet	62
	1020	m³/s	1.960	1.903	1.841	1.771	1.692	1.504	1.275	1.030	0.780	0.517	0.266	-	28.3	0.907	1.73	4	Inlet	54
		W/(L/s)	0.48	0.49	0.51	0.54	0.56	0.63	0.74	0.88	1.10	1.51	2.64	-					Outlet	54
	865	m³/s	1.635	1.559	1.475	1.376	1.257	0.976	0.716	0.483	0.282	0.144	0.055	-	21.9	0.668	1.33	3	Inlet	51
		W/(L/s)	0.42	0.44	0.47	0.50	0.55	0.70	0.92	1.28	2.04	3.78	9.54	-					Outlet	49
	700	m³/s	1.320	1.225	1.109	0.954	0.772	0.485	0.264	0.082	-	-	-	-	16.4	0.470	1.00	2	Inlet	48
		W/(L/s)	0.37	0.40	0.44	0.51	0.62	0.95	1.67	5.22	-	-	-	-					Outlet	43

Data provided is at standard air density of 1.2 kg/m³.

Data in accordance with ErP 1253/2014 of the European Parliament. Product category is NRVU. Measurement category used to determine energy efficiency: C.

Peak Amps @ 400V / 3PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

CLEARFLOW CF



Sound Data

Single Phase 220V to 240V / 50Hz

Product Code	Speed r/min		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
CF315/4-1AC	1390	Inlet	64	71	68	65	62	59	54	48	74
		Outlet	65	71	71	67	63	60	54	48	76
	1200	Inlet	63	69	66	64	61	57	53	47	73
		Outlet	63	71	68	65	62	58	52	46	74
	1060	Inlet	62	69	65	63	60	56	51	44	72
		Outlet	63	70	66	64	60	57	50	44	73
	895	Inlet	67	63	61	58	54	49	42	42	70
		Outlet	67	65	63	59	55	48	42	42	71
CF350/4-1AC	1320	Inlet	65	73	70	66	69	64	61	58	77
		Outlet	65	76	72	68	67	64	60	57	79
	1100	Inlet	66	69	68	65	68	64	60	57	75
		Outlet	63	75	70	67	68	63	59	57	78
	975	Inlet	65	69	66	63	63	65	58	55	74
		Outlet	62	73	65	65	64	60	56	52	75
	845	Inlet	64	71	65	62	68	61	57	52	74
		Outlet	62	71	64	63	62	59	55	51	73
CF400/4-1AC	1390	Inlet	71	74	73	69	71	67	63	60	79
		Outlet	68	75	73	70	69	66	63	59	79
	1200	Inlet	73	74	70	67	69	64	60	56	79
		Outlet	70	74	69	68	66	63	60	55	78
	1055	Inlet	72	71	68	66	64	63	57	53	76
		Outlet	69	72	68	66	65	61	57	52	76
	900	Inlet	70	70	66	64	67	59	54	49	75
		Outlet	66	68	65	62	61	57	52	46	72
CF450/4-1AC	1315	Inlet	71	80	80	73	71	71	69	67	84
		Outlet	74	83	79	78	78	76	69	67	87
	1020	Inlet	69	79	75	71	69	71	67	65	82
		Outlet	74	82	76	76	76	72	68	65	85
	865	Inlet	78	79	74	70	68	71	66	62	83
		Outlet	75	78	75	74	73	71	65	62	83
	700	Inlet	77	78	73	69	67	68	64	61	82
		Outlet	75	79	75	73	72	69	64	60	83

Data provided at standard air density of 1.2 kg/m³.
 Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
 The Sound Power Level Spectra are in dB re-1pW.

CLEARFLOW CF



Sound Data

Three Phase 380V to 415V / 50Hz

Product Code	Speed r/min		Sound Power Level dBW @ Octave Band Hz								Total dB
			63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	
CF350/4-3AC	1390	Inlet	63	75	70	65	62	63	61	57	77
		Outlet	66	75	72	68	70	65	60	56	79
	1200	Inlet	67	72	66	63	61	61	58	54	75
		Outlet	63	68	65	64	67	60	55	51	73
	1060	Inlet	64	67	63	62	59	59	55	49	71
		Outlet	60	68	61	61	62	57	51	46	71
895	Inlet	58	61	60	60	57	51	49	42	67	
	Outlet	56	61	59	57	54	50	45	38	65	
CF400/4-3AC	1320	Inlet	71	74	73	69	71	67	63	60	79
		Outlet	68	75	73	70	69	66	63	59	79
	1100	Inlet	73	74	70	67	69	64	60	56	79
		Outlet	70	74	69	68	66	63	60	55	78
	975	Inlet	72	71	68	66	64	63	57	53	76
		Outlet	69	72	68	66	65	61	57	52	76
845	Inlet	70	70	66	64	67	59	54	49	75	
	Outlet	66	68	65	62	61	57	52	46	72	
CF450/4-3AC	1390	Inlet	67	83	75	72	70	71	68	66	85
		Outlet	69	79	76	77	79	79	69	66	85
	1200	Inlet	62	69	66	62	63	62	57	53	73
		Outlet	63	73	68	66	69	61	56	51	76
	1055	Inlet	65	75	69	66	65	67	62	59	78
		Outlet	66	76	73	70	72	66	62	57	80
900	Inlet	65	80	72	68	66	69	65	61	82	
	Outlet	67	78	73	73	75	73	65	61	82	
CF500/4-3AC	1315	Inlet	72	84	77	74	72	71	69	67	86
		Outlet	74	82	79	78	78	75	70	67	86
	1020	Inlet	72	76	72	68	71	67	63	59	80
		Outlet	70	80	75	71	70	66	62	57	82
	865	Inlet	70	72	68	64	69	63	58	53	77
		Outlet	68	73	69	66	65	61	56	50	76
700	Inlet	68	67	64	63	66	57	53	47	73	
	Outlet	66	68	64	61	59	54	49	41	72	

Data provided at standard air density of 1.2 kg/m³.
 Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.
 The Sound Power Level Spectra are in dB re-1pW.

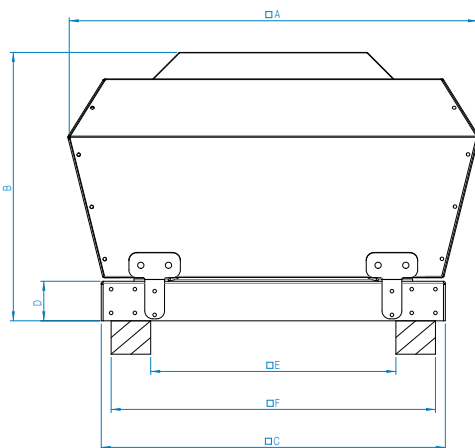
CLEARFLOW CF



Dimensional Data

Single & Three Phase

Product Code	A	B	C	D	E	F	Weight kg
CF315/4-1AC	520	340	435	50	310	410	25
CF350/4-1AC	665	421	520	50	400	500	32
CF350/4-3AC	665	421	520	50	400	500	32
CF400/4-1AC	665	421	520	50	400	500	36
CF400/4-3AC	665	421	520	50	400	500	36
CF450/4-1AC	902	542	740	60	620	720	59
CF450/4-3AC	902	542	740	60	620	720	59
CF500/4-3AC	902	542	740	60	620	720	67



Dimensions are in mm.

CLEARFLOW CF

Accessories



Single Phase

Product Code	Transformer Controller	Wiring Diagram
CF315/4-1AC	149-TC14	152-104A
CF350/4-1AC	149-TC14	152-104A
CF400/4-1AC	149-TC14	152-104A
CF450/4-1AC	149-TC18	152-104A

Three Phase

Product Code	Transformer Controller	Wiring Diagram
CF350/4-3AC	149-TC33	152-106A
CF400/4-3AC	149-TC310	152-106A
CF450/4-3AC	149-TC310	152-106A
CF500/4-3AC	149-TC310	152-106A

Building Services

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