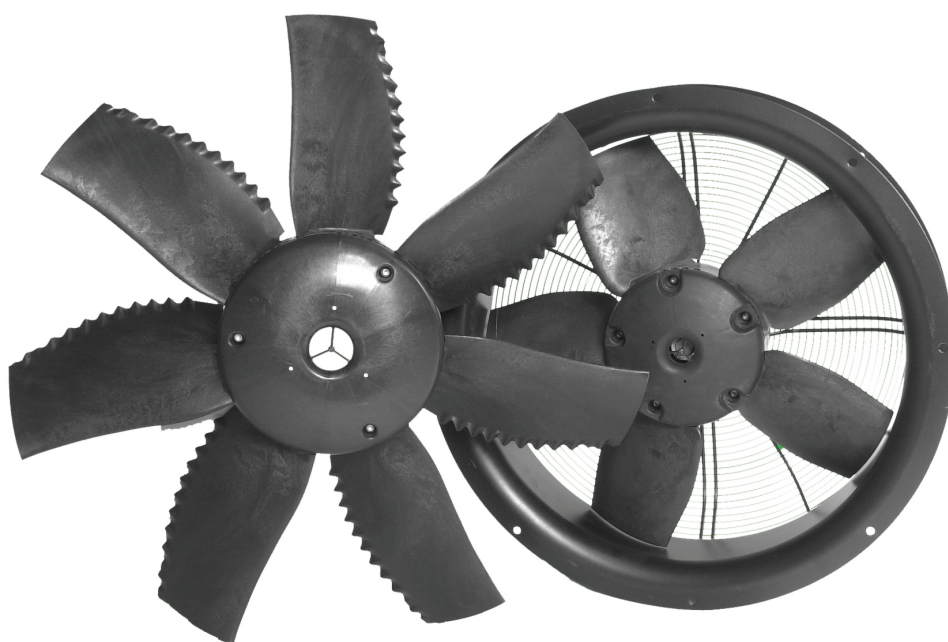


## *Compac-Climafan*



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Tel: 011/3836886, 3085740  
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A Fläkt Woods Company

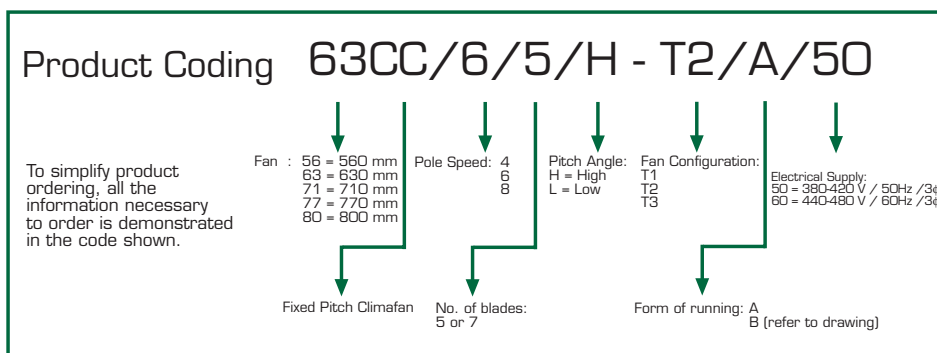
**Woods**

# The Compac-Climafan from Woods Air Movement combines premium aerodynamic and acoustic performance with innovative design to offer a compact fan unit ideally suited for OEM heat transfer and HVAC applications.

On all fan sizes 560mm - 800mm, the unique integrated fan and axial air gap motor offers what may well be the lowest profile fan available anywhere.

The Compac-Climafan heralds a new era in fan design and technology, extending and setting new standards of innovation, performance and reliability.

- Asymmetrically spaced and crenelated blades provide low noise characteristics and increased efficiencies.
- Compact design with a unique integrated axial air gap motor & impeller, available on all sizes.
- Easy fixing with flexible mounting configurations increase customer options.
- Minimal moving parts for maximum reliability.
- Motor protection up to IP65.
- Fan designed for frequent starting.
- Continuous running from -40°C to 65°C
- Sizes from 560 mm to 800 mm diameter with multiple speed configurations.
- Overheat protection is an available option on all sizes.
- Suitable for inverter control as standard.
- Steep volume/pressure performance curve.
- Fast availability.



## **Fan**

The Compac-Climafan has superb performance with a steep volume/pressure performance curve, giving greater flexibility in system design and making it more tolerant of pressure variations.

## **Impeller**

Blade sections and geometry have been selected to provide a volume/pressure characteristic to suit both OEM heat transfer and HVAC applications, giving improved efficiency.

The one-piece impellers are manufactured from glass coupled engineering polymers, which are UV stabilised. These have been developed using finite element stress analysis to provide a structural hub with a smooth transition into the blade form. 560 – 710 mm 5 bladed impellers are asymmetrically spaced to "soften" the blade passing tone. 710 – 800mm 7 bladed impeller blades include a crenelated blade offering reduced sound levels and increased efficiency. Blade section thickness, consistent with providing sufficient strength, is kept to a minimum to further reduce noise.

The fan, being an integrated product of impeller and motor, is balanced as a complete unit using dynamic single plane balancing. The balance grade is G6.3.

## **Motors**

The Axial Air Gap motors integrated into the Compac-Climafan are the result of an extensive programme to develop a fan motor to meet the harsh requirements of the OEM heat transfer market. The unique "pancake" construction allows manufacture of a low profile fan.

A unique and innovative feature of the AA145 is the motor's IP65 rating which is obtained by encapsulating the stator with a thermosetting polymer. This means that the motor is impervious to the ingress of water and cannot be contaminated.

The bearing arrangement is of a well proven automotive standard, designed to withstand very rigorous and harsh environments. The bearing seals are also of an exceptionally high standard giving a reduced risk of bearing contamination. Bearings are pre-lubricated with high performance grease and sealed-for-life, eliminating any need for maintenance.

Designed to give maximum flexibility of control and where appropriate can be used to give two speeds by Delta/Star reconnect. In order to suit the requirements of OEM heat transfer applications, AA motors can be run continuously from -40°C to +65°C. Overheat protection is fitted as standard on AA145 frame motors.

## **Performance Data**

The air and sound performance data has been measured in accordance with the following Standards:-ISO5801:1997, type A installation test method for air performance (dual numbered BS848 Pt1:1997). BS848 Pt 2:1985, type A installation, method of noise testing.

Sound data is shown for the mid point of the performance characteristic. Inlet sound power levels are given in 8 octave bands along with the over-all inlet sound power level. Outlet sound pressure levels at 3 m along the fan axis and at 90° to it are also provided. Performance data is based on type 2 fan configuration.

## **Electrical Supply**

380-420 V / 50 Hz / 3φ

440-480 V / 60 Hz / 3φ

## **Quality and Reliability**

The reliability of this fan has been a primary design consideration. The steps taken to ensure reliability are numerous:

Dramatically reduced number of parts by integration of fan and motor. Every axial air gap motor is earth tested before encapsulation and then high voltage tested before despatch. The bearing seals and motor encapsulation eliminate the possibility of contamination, which extends the product life. Motors are designed for frequent starts, up to 60 an hour. The fan and motor are designed to be TOTALLY MAINTENANCE FREE. All products in the Compac-Climafan range are supplied with our standard 2 year warranty.

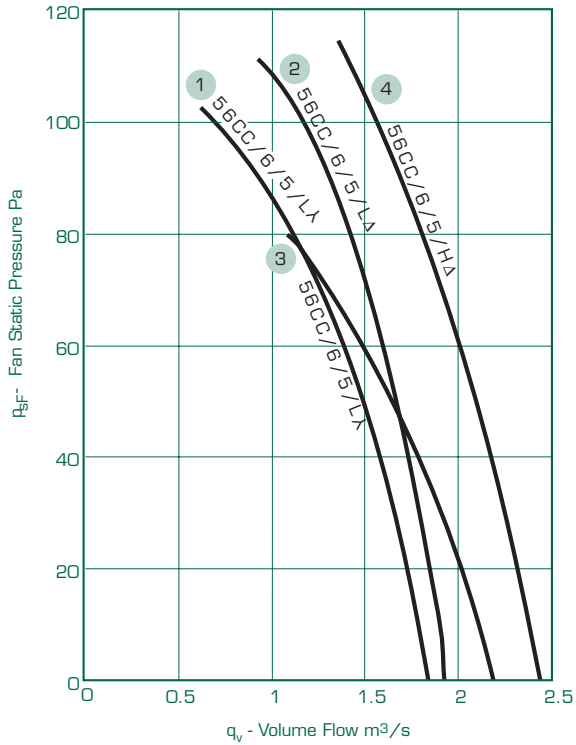
## **Installation/handling**

The 4 point fixing method enables fast and easy mounting of the type 1 fan. A unique terminal box design also allows for very rapid, reliable and easy electrical connection.

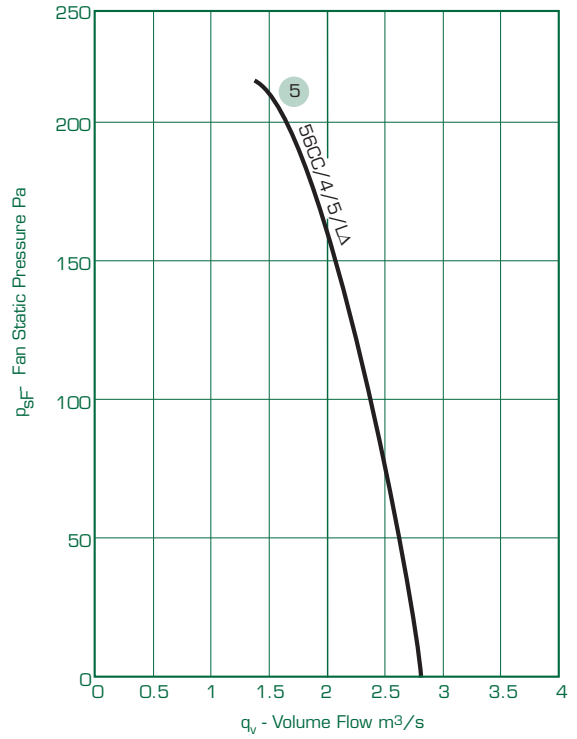
Flexibility of design gives multiple mounting configurations. The compactness of the product improves handling and provides for reductions in transport and storage costs. Our new responsive manufacturing cells have extensive experience in JIT manufacturing systems to ensure reliable delivery which can be tailored to meet the specific needs of our customers schedules. Careful attention to detail and design of packaging means fans are easy to handle and take up less room.

# Performance 50 Hz

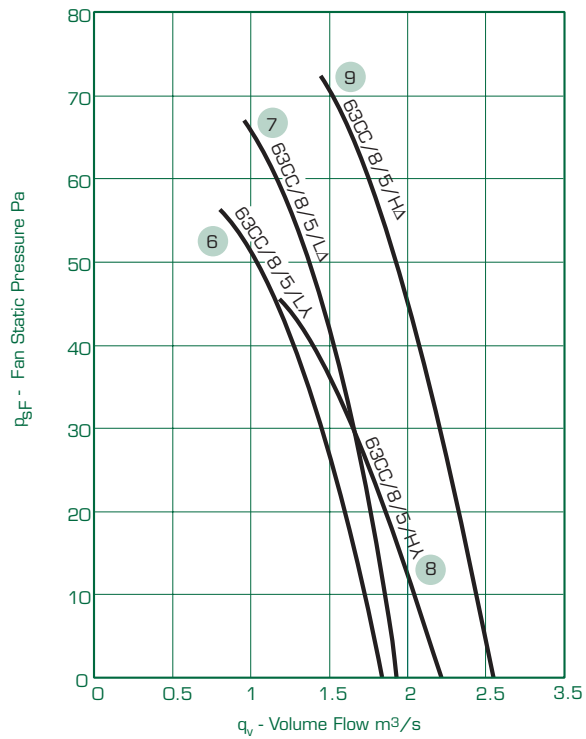
560 mm 6 Pole



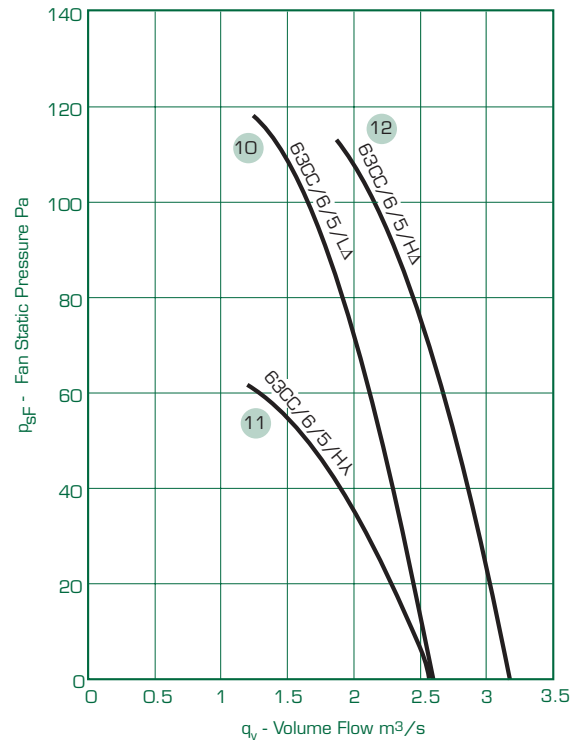
560 mm 4 Pole



630 mm 8 Pole

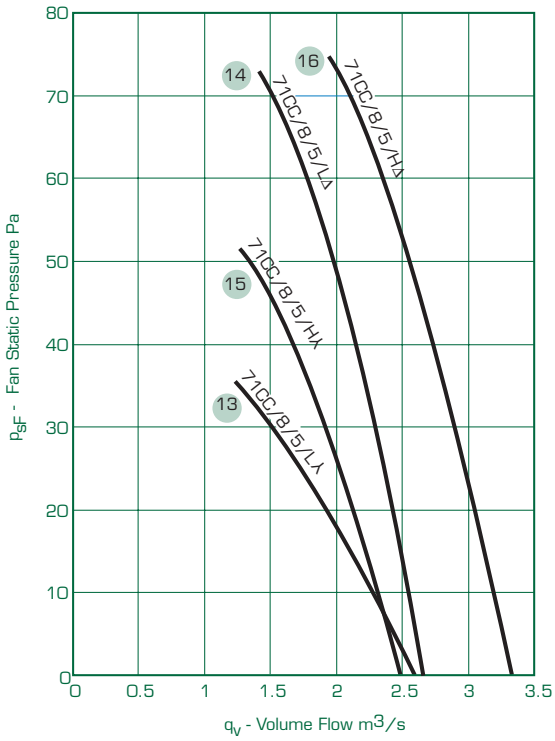


630 mm 6 Pole



# Performance 50 Hz

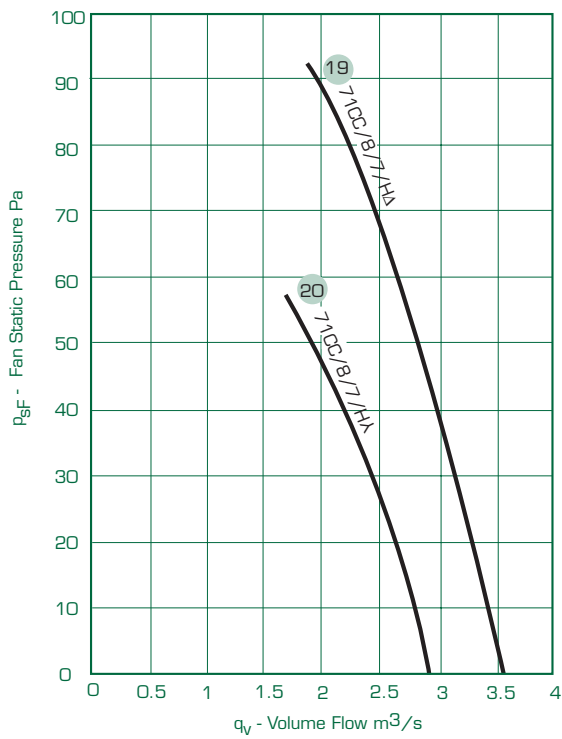
710 mm 8 Pole



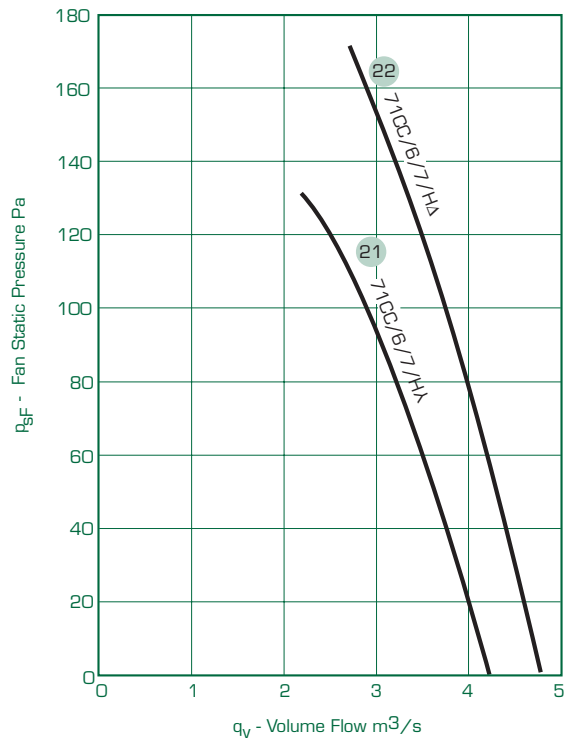
710 mm 6 Pole



710 mm 8 Pole

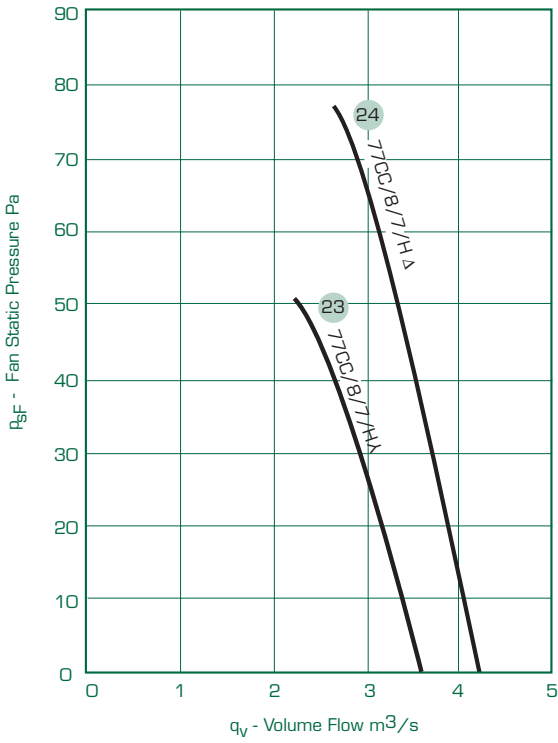


710 mm 6 Pole

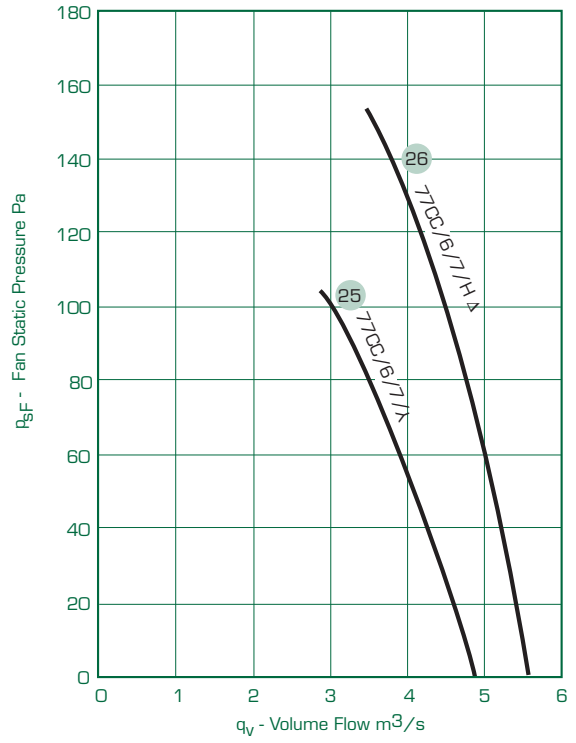


# Performance 50 Hz

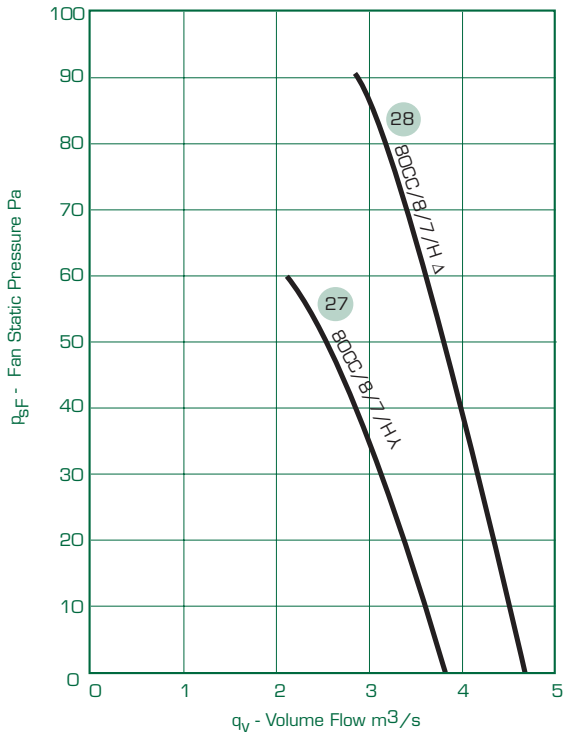
770 mm 8 Pole



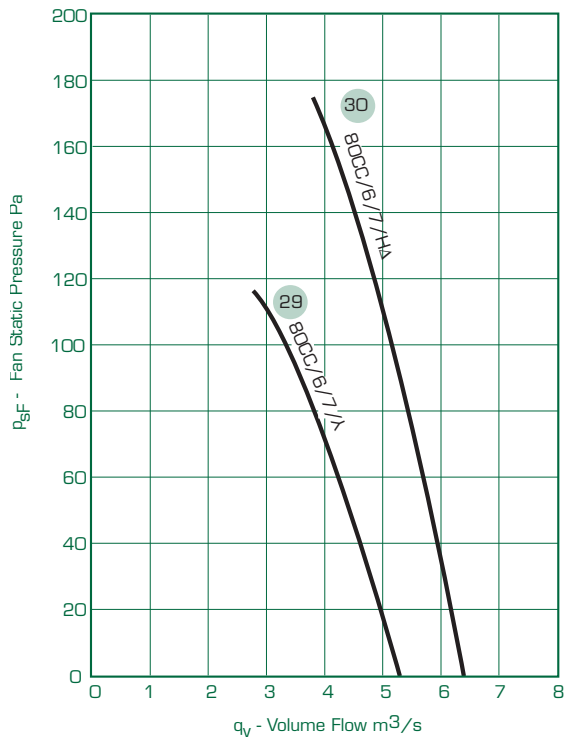
770 mm 6 Pole



800 mm 8 Pole



800 mm 6 Pole

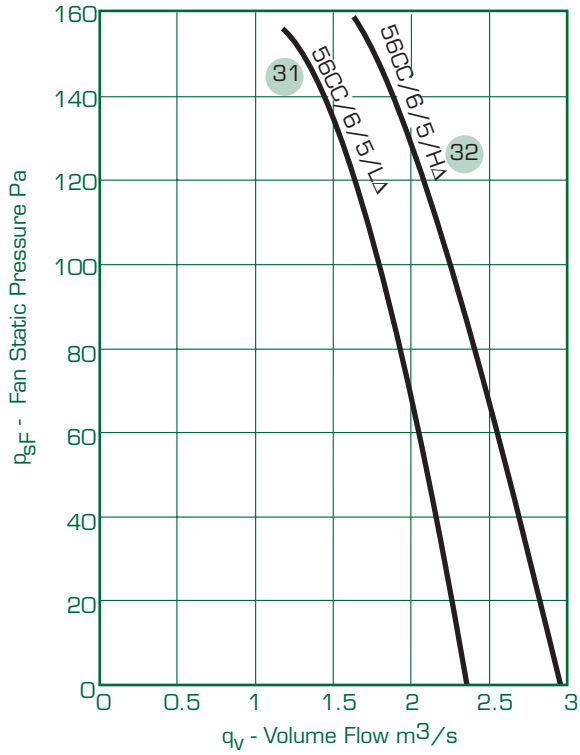


# Technical Detail 50 Hz

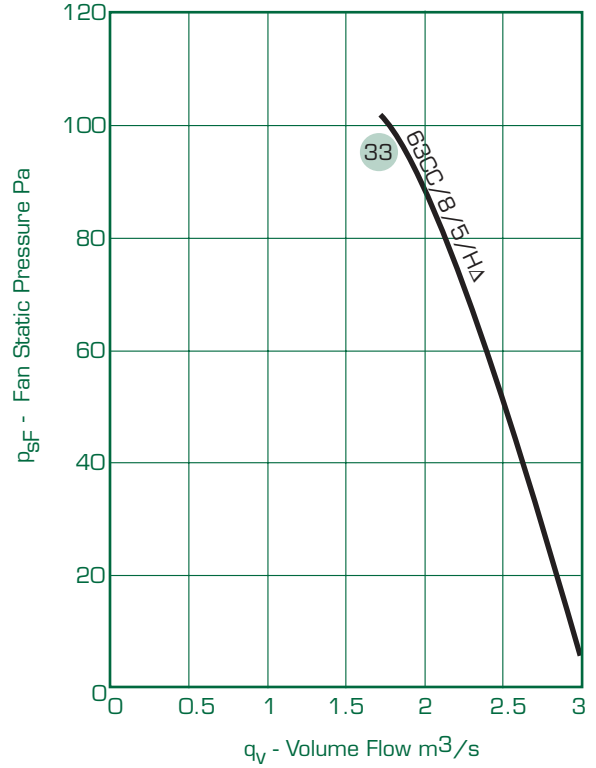
Fan Code	Fan Curve	Supply Conn.	Motor Frame (kW)	Motor Rating	Speed (rev/min)	Full Load Current (A)	Starting Current (A)	Inlet Sound Power Level in dB re 1pW Octave Band Mid-Frequency										Outlet Sound Pressure Level @ 3 m	
								63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total LwA	@ 0° LpA	@ 90° LpA	
1	56CC/6/5/L	λ	AA145	0.1	875	0.7	2	68	63	67	72	65	58	56	55	71	60	55	
2	56CC/6/5/L	Δ	AA145	0.26	960	1.3	6.3	72	65	69	74	68	61	59	57	74	62	57	
3	56CC/6/5/H	λ	AA145	0.14	760	0.9	2	65	62	66	72	67	63	59	55	72	56	53	
4	56CC/6/5/H	Δ	AA145	0.36	950	1.5	6.3	72	65	69	75	74	67	64	59	77	61	58	
5	56CC/4/5/L	Δ	AA145	0.65	1370	2.2	11.2	74	77	78	80	79	72	69	65	82	67	64	
6	63CC/8/5/L	λ	AA145	0.14	630	0.9	1.3	61	66	67	55	58	54	48	41	64	50	44	
7	63CC/8/5/L	Δ	AA145	0.17	720	1.5	4.5	62	69	71	67	64	61	56	49	70	55	49	
8	63CC/8/5/H	λ	AA145	0.14	550	0.8	1.3	56	60	61	57	55	52	47	39	60	47	41	
9	63CC/8/5/H	Δ	AA145	0.21	710	1.5	4.5	65	68	70	65	63	61	57	52	69	56	50	
10	63CC/6/5/L	Δ	AA145	0.32	950	1.4	6.3	72	69	73	71	70	66	63	54	75	61	58	
11	63CC/6/5/H	λ	AA145	0.16	640	1.1	2	64	63	65	68	63	59	55	50	69	54	51	
12	63CC/6/5/H	Δ	AA145	0.46	920	1.7	6.3	72	68	72	72	73	66	64	58	76	62	59	
13	71CC/8/5/L	λ	AA145	0.13	590	0.7	1.3	65	70	71	64	62	58	52	45	68	54	48	
14	71CC/8/5/L	Δ	AA145	0.19	715	1.4	4.5	66	72	75	71	68	65	60	53	74	59	53	
15	71CC/8/5/H	λ	AA145	0.16	400	0.9	1.3	60	64	65	61	58	56	51	43	64	51	45	
16	71CC/8/5/H	Δ	AA145	0.25	695	1.5	4.5	68	72	74	69	67	65	61	56	73	60	54	
17	71CC/6/5/L	λ	AA145	0.15	660	1.1	2	70	69	71	72	70	67	61	53	75	61	57	
18	71CC/6/5/L	Δ	AA145	0.42	930	1.6	6.3	75	73	77	76	76	73	69	62	80	67	62	
19	71CC/8/7/H	λ	AA181	0.24	550	1.11	2.4	69	66	69	64	59	55	52	48	66	57	53	
20	71CC/8/7/H	Δ	AA181	0.43	680	2.45	6.8	72	71	74	71	66	60	57	52	72	62	60	
21	71CC/6/7/H	λ	AA181	0.7	800	2.14	4.8	72	73	74	74	69	64	63	58	75	67	63	
22	71CC/6/7/H	Δ	AA181	1.09	930	4.2	14.7	75	75	77	76	72	68	67	62	78	71	66	
23	77CC/8/7/H	λ	AA181	0.28	540	1.22	2.4	72	68	72	67	62	57	55	50	69	59	56	
24	77CC/8/7/H	Δ	AA181	0.54	670	2.55	6.8	75	73	77	74	68	62	60	55	75	65	63	
25	77CC/6/7/H	λ	AA181	0.64	760	2.42	4.8	75	75	77	77	72	67	65	60	78	70	66	
26	77CC/6/7/H	Δ	AA181	1.26	915	4.32	14.7	78	78	80	79	75	70	70	65	81	74	69	
27	80CC/8/7/H	λ	AA181	0.32	525	1.28	2.4	73	70	73	68	63	58	56	52	70	61	57	
28	80CC/8/7/H	Δ	AA181	0.64	665	2.65	6.8	76	74	78	75	70	64	61	56	76	66	64	
29	80CC/6/7/H	λ	AA181	0.7	720	2.63	4.8	76	77	78	78	73	68	67	62	79	71	67	
30	80CC/6/7/H	Δ	AA181	1.4	900	4.64	14.7	79	79	81	80	76	72	71	66	82	75	70	

# Performance 60 Hz

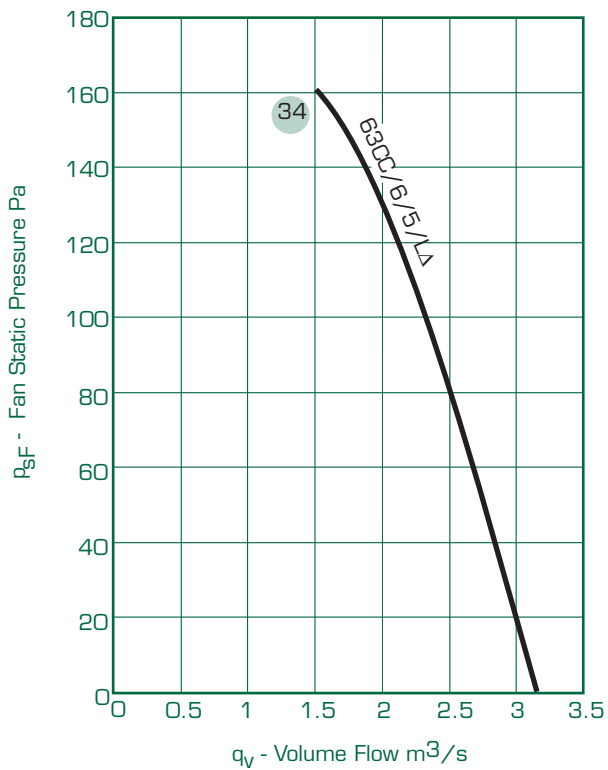
560 mm 6 Pole



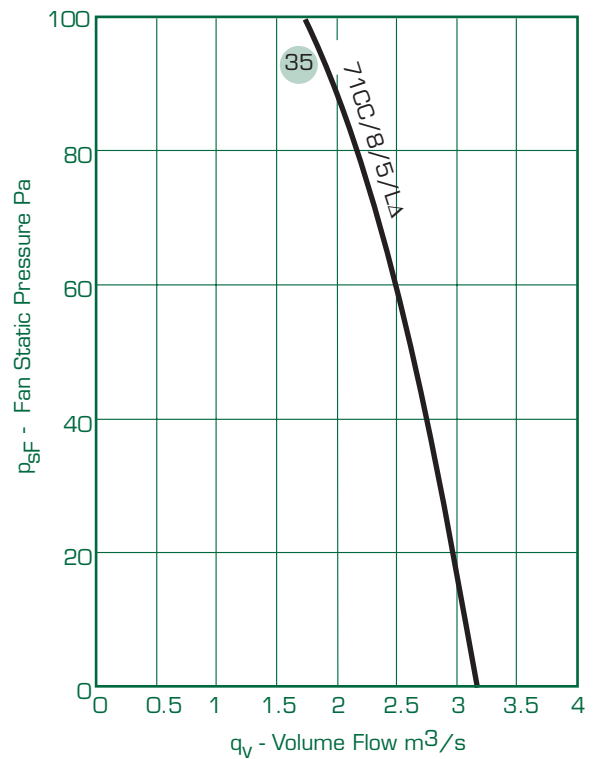
630 mm 8 Pole



630 mm 6 Pole



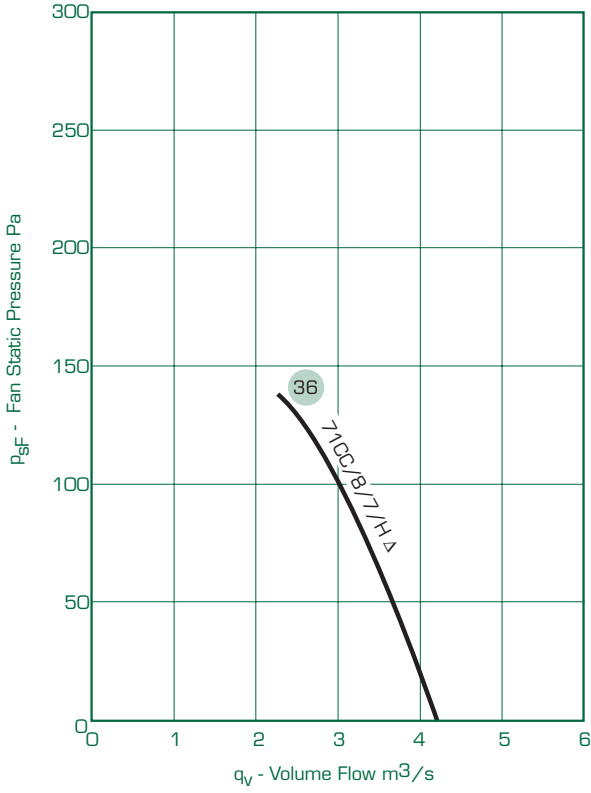
710mm 8 Pole



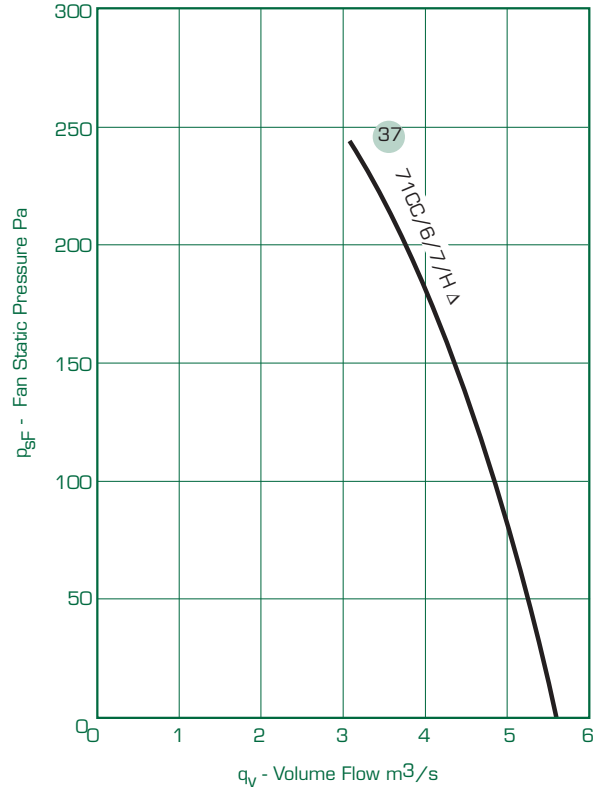


# Performance 60 Hz

710 mm 8 Pole



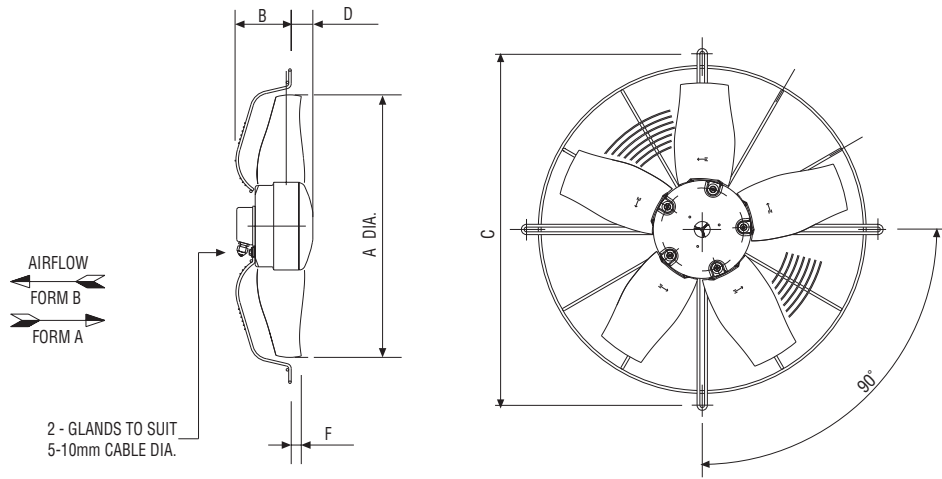
710 mm 6 Pole



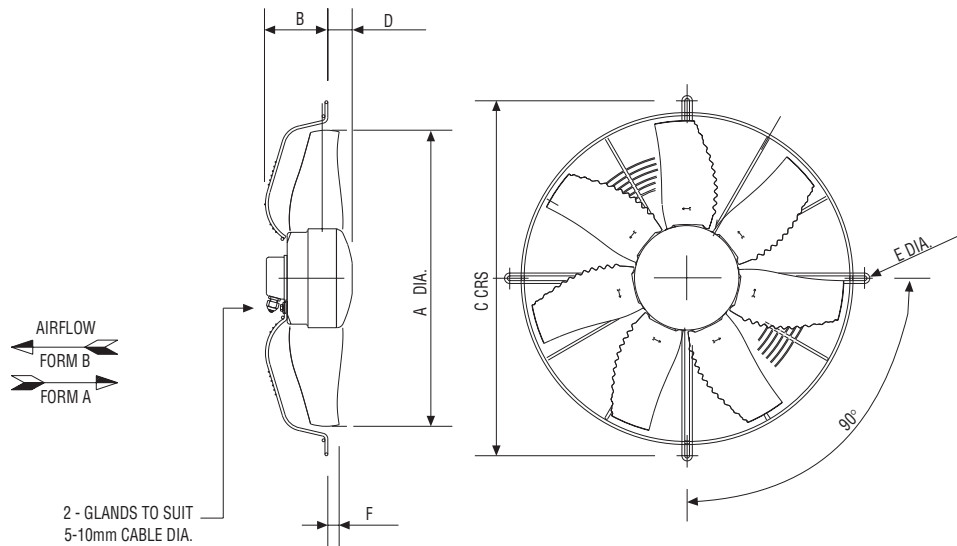
# Technical Detail 60 Hz

Fan Code	Fan Curve	Supply Conn.	Motor Frame (kW)	Motor Rating	Speed (rev/min)	Full Load Current (A)	Starting Current (A)	Inlet Sound Power Level in dB re 1pW Octave Band Mid-Frequency										Outlet Sound Pressure Level @ 3 m	
								63Hz	125Hz	250Hz	500Hz	1kHz	2kHz	4kHz	8kHz	Total LwA	@ 0° LpA	@ 90° LpA	
31	56CC/6/5/L	Δ	AA145	0.41	1160	1.5	6.7	72	74	74	74	74	68	64	62	77	61	59	
32	56CC/6/5/H	Δ	AA145	0.58	1125	1.8	6.7	74	73	74	76	78	70	67	64	81	66	63	
33	63CC/8/5/H	Δ	AA145	0.31	845	1.6	6.3	69	72	75	69	68	65	61	57	73	60	54	
34	63CC/8/5/L	Δ	AA145	0.51	1125	1.6	6.7	72	75	77	75	75	70	67	60	79	66	61	
35	71CC/8/5/L	Δ	AA145	0.28	855	1.5	6.3	68	76	80	75	73	69	65	58	78	63	57	
36	71CC/8/7/H	Δ	AA181	0.85	801	2.94	7	72	73	75	74	68	63	63	58	74	67	65	
37	71CC/6/7/H	Δ	AA181	2.01	1081	4.77	16	71	69	77	76	71	68	70	66	78	75	71	

# Type 1 Mounting Configuration

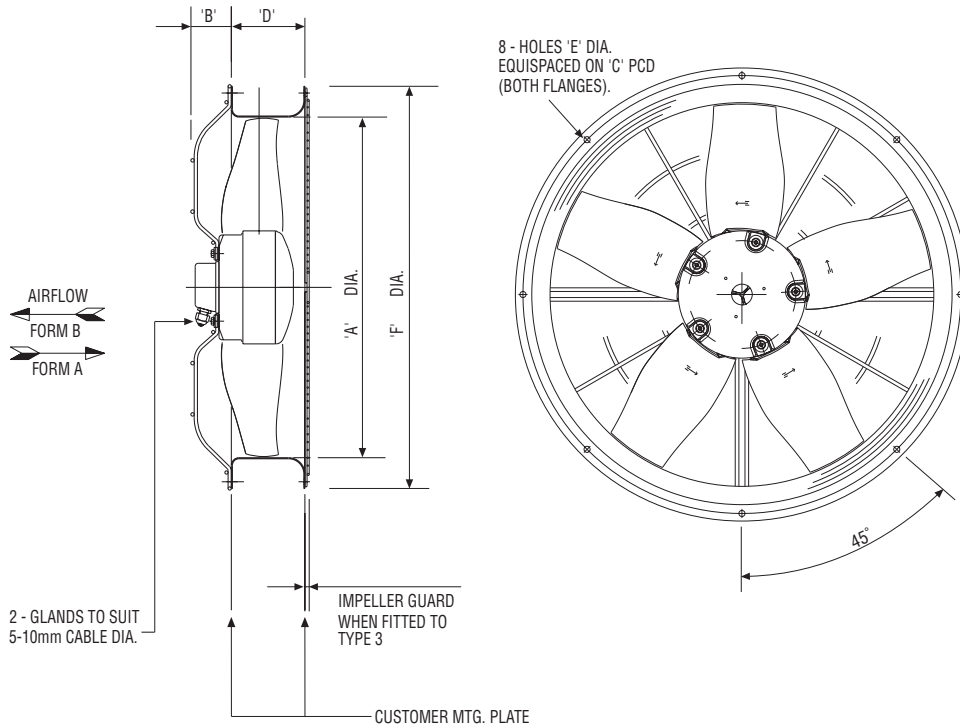


Size	Motor Frame	A	B	C	D	E	F	Weight (kg)
560	AA145	555	134	700	52	10	20	15.0
630	AA145	625	134	750	52	10	24	15.5
710	AA145	705	134	830	52	10	31	16.0



Size	Motor Frame	A	B	C	D	E	F	Weight (kg)
710	AA181	705	200	800	40	10	15	24.0
770	AA181	765	200	860	40	10	17	25.0
800	AA181	795	200	890	40	10	18	26.0

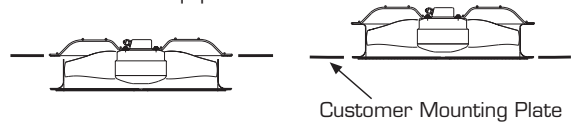
# Type 2 & 3 Mounting Configurations



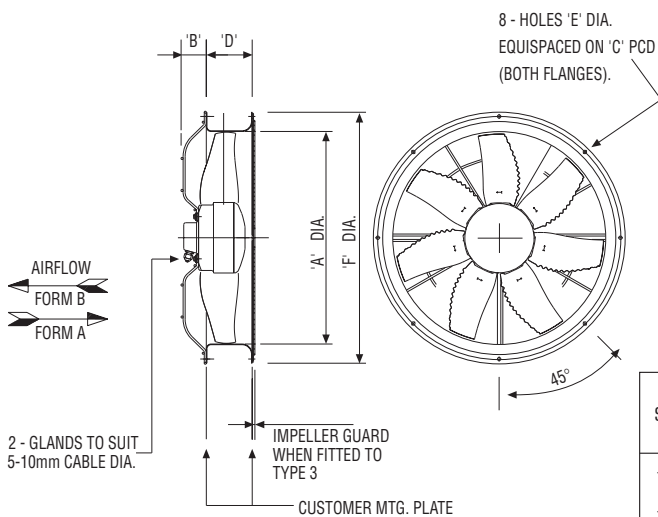
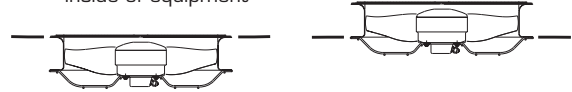
Size	Motor Frame	A	B	C	D	E	F	Weight (Kg)
560	AA145	560	75	650	136	10	674	20.0
630	AA145	630	75	720	136	10	744	21.0
710	AA145	710	75	800	136	10	824	22.0

## Type 2 & 3 Typical Installations

TYPE 2 - Motor and connections outside of equipment



TYPE 3 - Motor and connections inside of equipment



Size	Motor Frame	A	B	C	D	E	F	Weight (kg)
710	AA181	710	90	800	164	10	824	31.0
770	AA181	770	90	860	164	10	884	33.0
800	AA181	800	90	890	164	10	914	34.0

AA181 motors are not suitable for Type 3 mounting configuration