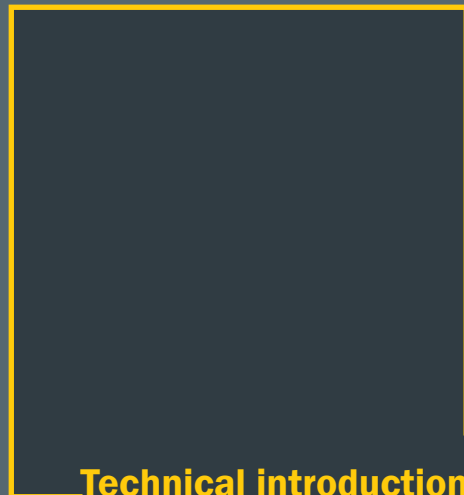


# Roof Exhaust Upblast Centrifugal Fans



## Models FCVS-Direct and FCVS-Belt



### Direct Drive, FCVS-D

- Model FCVS-D is a direct drive upblast centrifugal exhaust fan. fan wheel of a direct drive exhaust fan are attached directly to the fan motor's shaft. This system is widely considered to be more efficient.
- Maintenance costs are reduced as there are no belts or bearings to replace and no pulleys to adjust.

Use for short or low resistance ductwork.

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### Belt Drive, FCVS-B

Model FCVS-B is a Belt drive upblast centrifugal exhaust fan. These fans are specifically designed for remove smoke, steam, heat, grease, and other food-related vapors that would otherwise flood the kitchen and eventually leach into a restaurant's dining room.

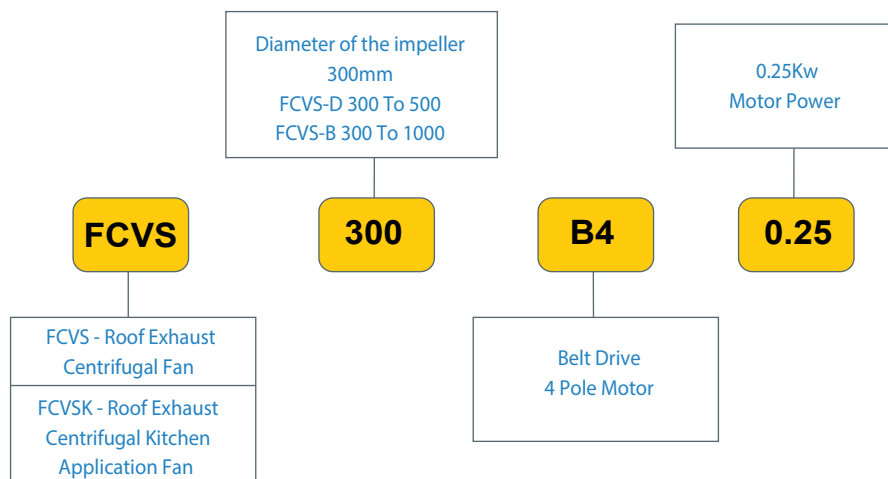
These spun aluminum fans are specifically designed for roof mounted applications. General clean or lightly contaminated exhaust air can be discharged directly upward, away from the roof surface or discharged out and away from building walls.

Maximum performance, up to 7.63 in.wg (1900 Pa) and 37668 cfm (64000 m3/hr). Most advanced motor cooling of any fan in its class.

All electrical components are UL listed. Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

### Reference Code

The model number code system is designed to completely identify the fan. The correct code letters must be specified to designate belt or direct drive. The remainder of the model code is determined by the size and performance.



## Dome

Two-piece, heavy-gauge aluminum with a rolled bead for extra strength directs exhaust air downward. The spun aluminum structural components shall be constructed of minimum 16 gauge marine alloy aluminum, bolted to a rigid aluminum support structure. The housing shall be weatherproof and housings provide complete protection of the motor and drive assembly, while allowing quick access to these components.

## Wheel

An aluminum, backward-inclined, non-overloading centrifugal wheel is utilized to generate high-efficiency and minimal sound. Wheel cones are carefully matched to the venturi for maximum efficiency. Each wheel is robotically welded and statically and dynamically balanced for long life and quiet operation.

## Motor

Carefully matched to the fan load and is mounted out of the airstream. Direct Drive Motor shall be NEMA design B with a minimum of class F insulation. Presenting a complete new electrical and mechanical design, the new platform of Rolled Steel motors made to run cooler, last longer and to be easier to install and maintain. These Open Drip Proof (ODP) motors are designed for environments where dirt and moisture are minimal.

These TEFC motors are designed for operating in environments of dirt, dust and moisture, on indoor and outdoor applications. IEC motors are optional. Motor and all other electrical components are UL listed.

## Motor cover

Constructed of aluminum and attached with fasteners that provide for easy removal and access to motor compartment and drive assembly.

## Fan shaft

Precisely sized, ground and polished so the first critical speed is at least 25% over the maximum operating speed. Where the shaft makes contact with bearings, tight tolerances result in longer bearing life.

## Inlet Cone

Inlet cone reduces turbulence and improves distribution of the air as it enters the wheel inlet and is "captured" by the blades.

## Fan Guard

We offer complete fan guard, Each guard is made to custom fit. Fan guards are used to provide a physical barrier around spinning fan blades to prevent accidental contact with fingers or other objects.

## Bearings

100% factory tested and designed specifically for air handling applications with a minimum L10 life in excess of 100,000 hours (L50 life of 500,000 hours).

## Belt Drive Assembly

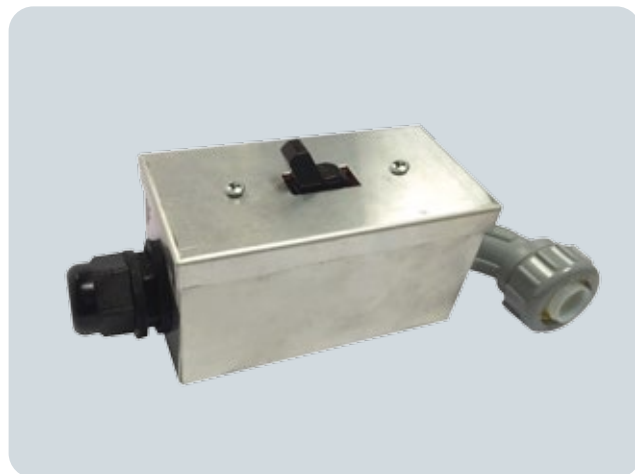
Belts, pulleys, and keys are oversized 150% of driven horsepower. Machined cast Pulleys are adjustable for final system balancing. Belts are static-free and oil-resistant.

## Drain Tube

Allows for one-point drainage of water, grease and other residue.



**Gravity back-draft damper**



**ON -OFF Switch**

### Gravity back-draft damper

Automatic operation with the help of seal on the edge of the damper blades for quiet operation. Designed to prevent outside air from entering back into the building when fan is off. Dampers feature square galvanized steel frame, multi-leaf, roll formed aluminum blades with nylon bearings.

### Grease Collector

The Grease Collector Box fastens to ventilator base. Easy to remove for cleaning. Diverts and traps heavy residual grease while protecting roof surface.

### Rubber mount (Belt Drive)

Motor and drive assembly is completely isolated from the fan supports by rubber isolators to reduce transmission of noise and vibration. Vibration isolators, with no metal-to-metal contact, support the drive assembly and wheel for long life and quiet operation. True vibration isolators consist of two independent studs separated by a neoprene (rubber) center. Reduces vibration and noise transfer between drive system and fan housing. No metal to metal contact.

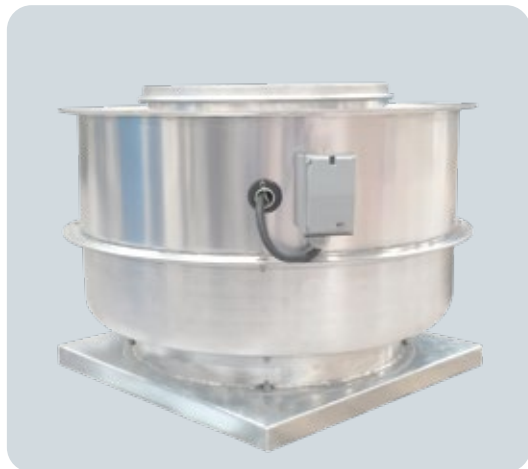
### Electrical Accessories.

#### On/Off Switch

Fans are provided with a type disconnect switch mounted in the motor compartment when ODP or TEFC motors are used. Switch is factory mounted and wiring is provided from the motor as standard. All wiring and electrical components comply with the National Electric Codes (NEC) ) and are UL Listed. Switches may be internally or externally mounted.

#### Liquidtight Conduit

A conduit tube is furnished for running electrical wiring through the curb cap and into the motor compartment. A large diameter Liquid tight Nonmetallic conduit for installing electrical wiring through the curb cap into the Motor compartment.



This series kitchen application centrifugal upblast fan is designed and built to handle the exhaust of hot, greasy air from commercial kitchen hoods. Maximum exhaust temperature for continuous operation is 300°F. This fan discharges contaminated air away from supply air intakes and building exteriors. These exhaust fans can be roof or wall mounted. These Fans are listed under UL 762.

The unique support structure combined with the backward inclined wheel and spun aluminum enable the upblast fans to operate at high static pressures. The Aluminum spun is precision matched to the wheel inlet to ensure maximum air flow along with protection from entry of adverse weather elements. Testing has also been conducted to ensure trouble-free start-up and to ensure product durability and dependability of operation.

Models covered are FCVSK-Direct drive 300 to 500 and FCVSK-Belt drive 300 to 500.

All electrical components are UL listed. Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

### Direct Drive, FCVSK-D

Model FCVSK-D is a direct drive upblast centrifugal exhaust fan. Fan wheel of a direct drive exhaust fan are attached directly to the fan motor's shaft. This system is widely considered to be more efficient. Maintenance costs are reduced as there are no belts or bearings to replace and no pulleys to adjust. Use for short or low resistance ductwork.

### Belt Drive, FCVSK-B

Model FCVSK-B is a Belt drive upblast centrifugal exhaust fan. These fans are specifically designed for remove smoke, steam, heat, grease, and other food-related vapors that would otherwise flood the kitchen and eventually leach into a restaurant's dining room. These spun aluminum fans are specifically designed for roof mounted applications. General clean or lightly contaminated exhaust air can be discharged directly upward, away from the roof surface or discharged out and away from building walls. Maximum performance, up to 7.63 in.wg (1900 Pa) and 37668 cfm (64000 m<sup>3</sup>/hr). Most advanced motor cooling of any fan in its class.

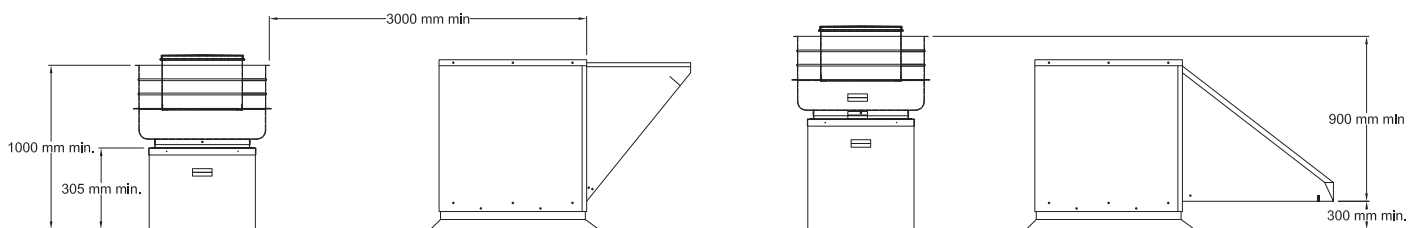
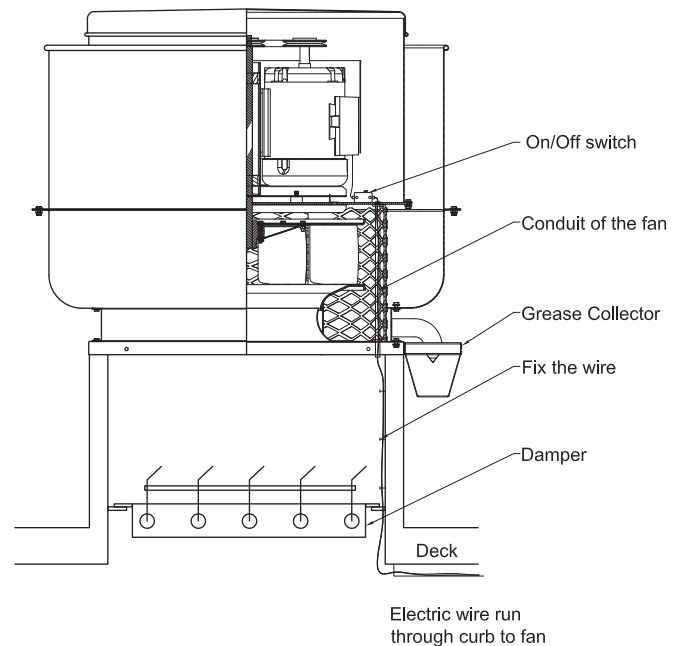
Motor and drives shall be isolated from the exhaust airstream. Air for cooling the motor shall be supplied to the internal motor compartment through a vent tube from a location free from discharge contaminants. Motors shall be of the heavy-duty type with permanently lubricated, sealed ball bearings. Motors shall be readily accessible for maintenance. Wheel shaft shall be ground, polished, Coated with a rust inhibitive finish and mounted in heavy-duty permanently sealed pillow block ball bearings which are capable of 200,000 hours of life, average operation

### GENERAL FEATURES

- Kitchen air pressure should be kept negative relative to dining and other areas to ensure odor control.
- The exhaust fan should be located at the discharge end of the duct run to minimize the effect of any ductwork leaks.
- Outdoor air louvers, intake and exhaust, should be located so the exhaust air is not drawn back into the system.
- On large hoods (over 12 feet long), if possible, use two small exhaust fans instead of one large fan. Benefits include uniform air distribution and the capability, depending on need, of operating one or both fans.
- Make-up air should equal 80-85% of exhausted air levels.
- Air velocity through ductwork is not to be less than 1500 FPM.
- Ventilators approved and listed for commercial cooking equipment use.
- Refer FCVS performance curve and dimensions for FCVSK fan selection.

## INSTALLATION INSTRUCTION

- 3000 mm minimum distance between exhaust fan and air intake unit.
- 3000 mm clearance from fan outlet to adjacent buildings and property lines.
- 1000 mm minimum clearance between fan outlet and roof surface with exhaust air flow directed up.
- Ductwork extends a minimum of 305 mm above the roof surface.
- Through masonry wall with a minimum of 3000 mm clearance from the outlet to adjacent buildings, property lines, combustible construction or electrical lines or equipment.
- Exhaust air flow perpendicular outward from the wall or upward.



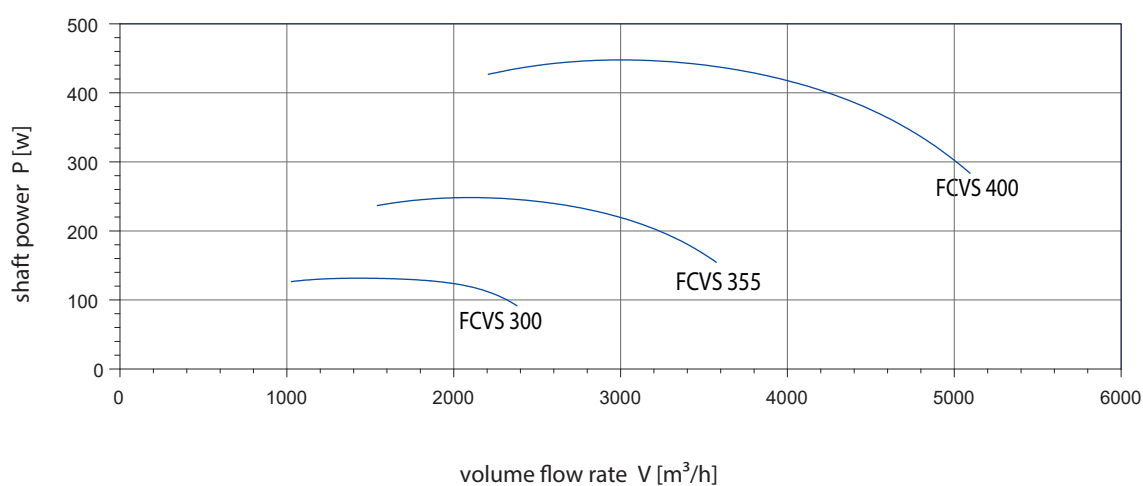
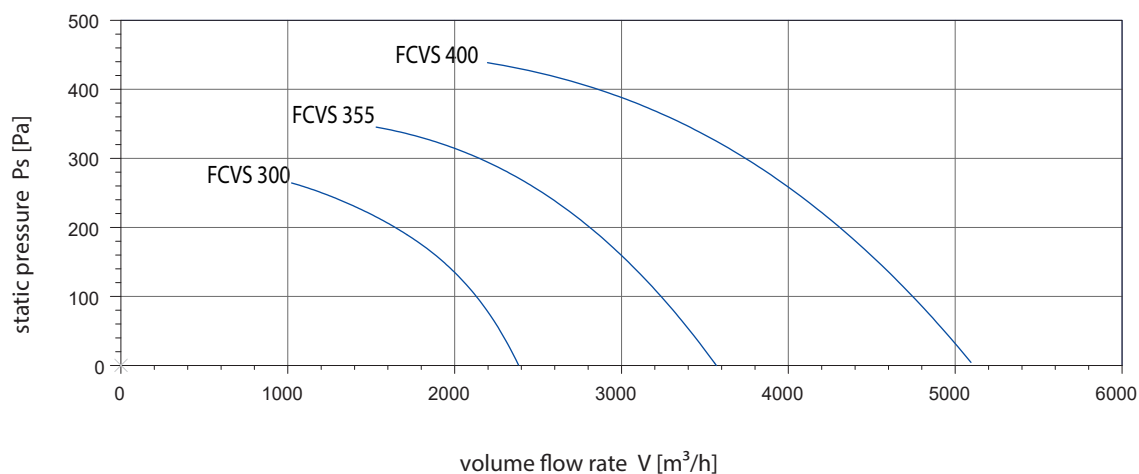
### Grease Collector:

GI material designed to collect grease residue to avoid drainage onto roof surface.

Grease trap shall include the drain connection and shall be constructed from Aluminum. The unit shall collect grease and water from the fan and extract the grease from the water for ease of grease disposal.

Grease collector is available only from 300 to 500 for both Direct and Belt drive models.

## Direct drive 4 Pole - 50Hz



## Sound Data

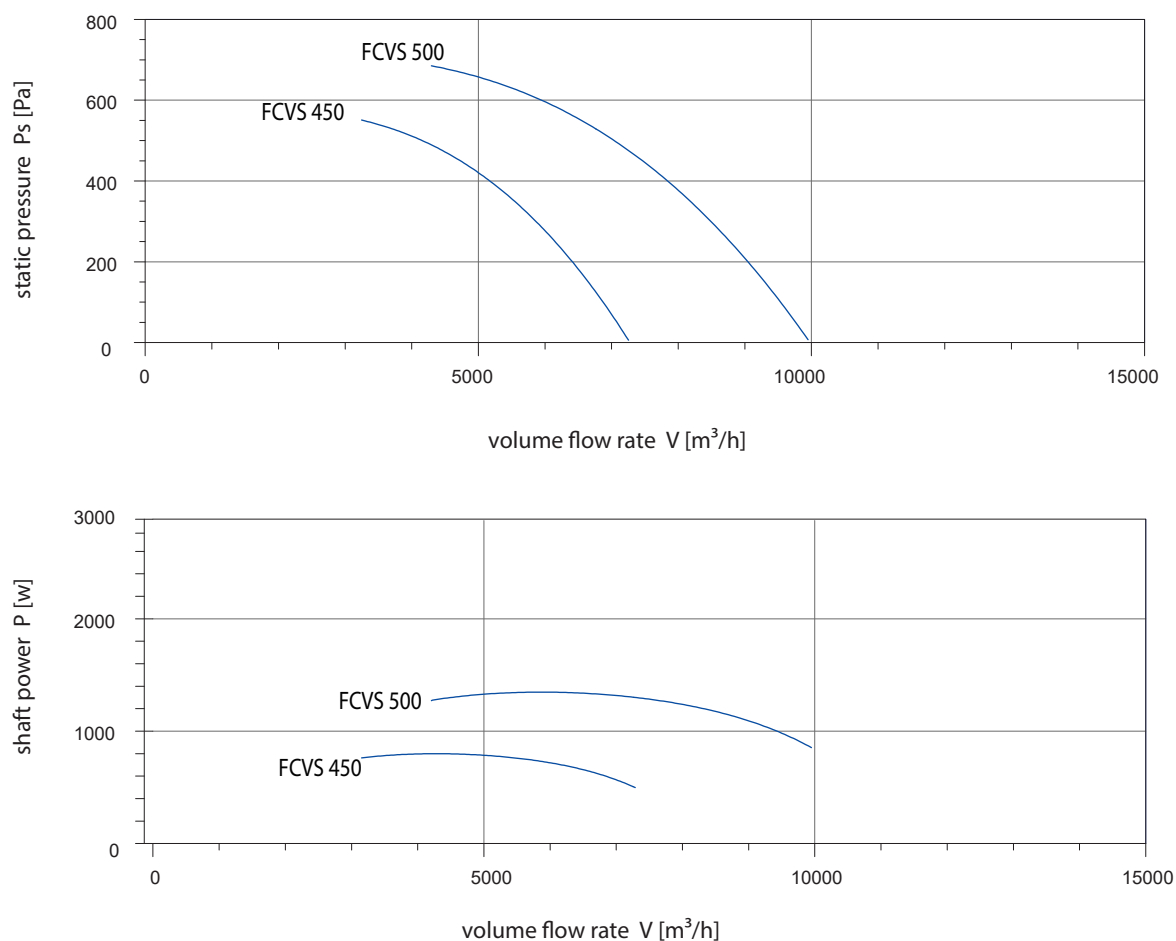
Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
Model	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3
FCVS 300	79.6	67.5	69	75.7	71.5	70.1	70.5	70.2	83	58
FCVS 355	67.4	65.9	76.3	76.8	76.5	73	79.4	65	84	63
FCVS 400	71	69.5	80	80.4	80.1	76.6	83	68.6	88	66

4 Pole - 50Hz						
Model	Q (CMH)	Type of motor	Max Power (watts)	A (amp)	V/P/Hz	IP/CL
FCVS 300	2400	ODP	180	6	240/1/50	IP21/F
FCVS 355	3600	ODP	370	7.2	240/1/50	IP21/F
FCVS 400	5100	ODP	550	8	240/1/50	IP21/F

Above motor data subject to change after performance

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Direct drive 4 Pole - 50Hz



## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
Model	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
FCVS 450	74.5	73.1	83.5	83.9	83.6	80.2	86.6	72.1	91	70
FCVS 500	77.8	76.3	86.7	87.2	86.9	83.4	89.8	75.4	94	73

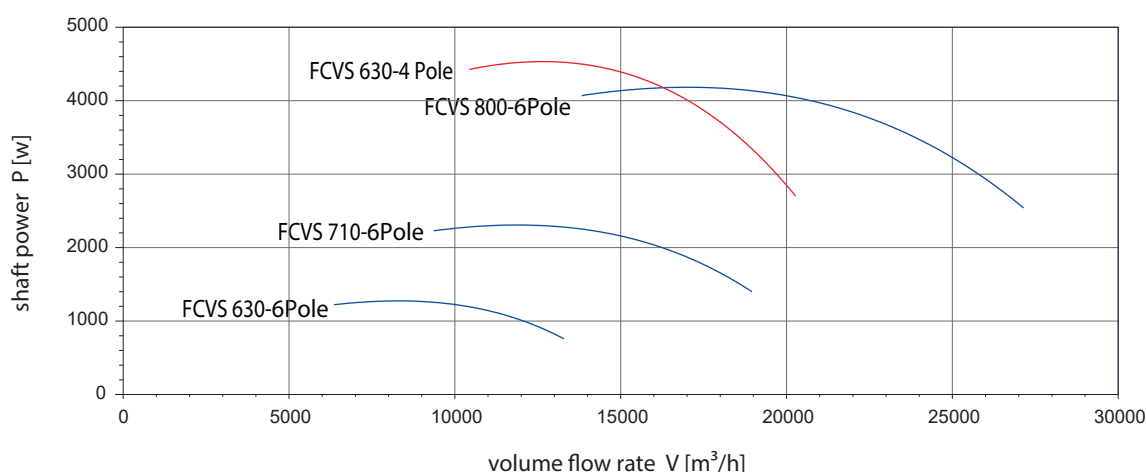
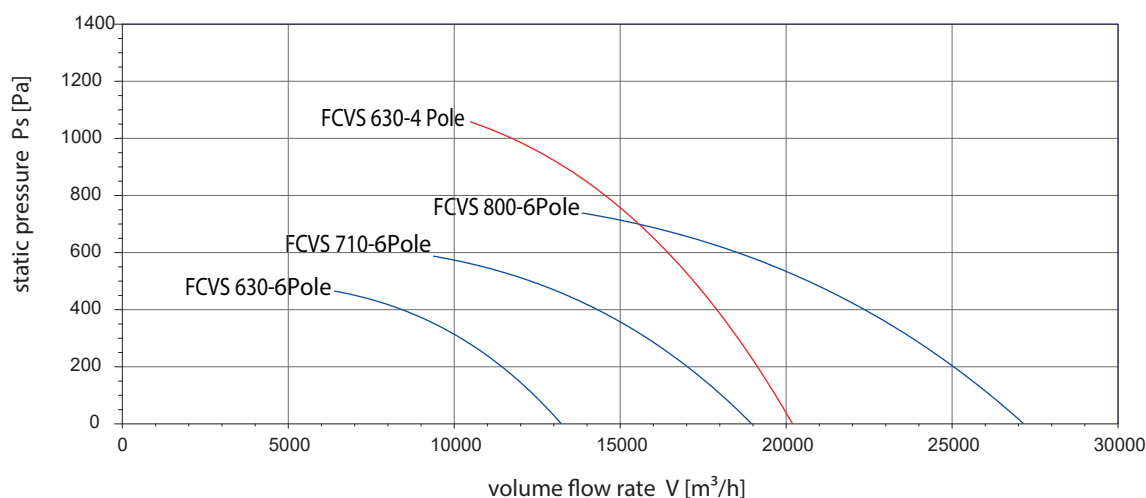
4 Pole - 50Hz						
Model	Q (CMH)	Type of motor	Max Power (watts)	A (amp)	V/P/Hz	IP/CL
FCVS 450	7200	ODP	1100	8.3	240/1/50	IP21/F
FCVS 500	10000	ODP	2200	4.4	415/3/50	IP21/F

Above motor data subject to change after performance

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.



## Direct drive 4 & 6 Pole - 50Hz



## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
Model	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
FCVS 630-4 Pole	95.1	102	98	94.4	89	85	79.4	72.9	105	76
FCVS 630-6 Pole	85.4	93.9	89.3	85.3	79.5	75.7	70.1	63.9	96	67
FCVS 710-6 Pole	89.5	96.6	92.5	88.9	83.4	79.5	73.8	67.4	99	70
FCVS 800-6 Pole	93.4	99.7	95.9	92.4	87.2	83.2	77.5	71	103	74

## 4&6 Pole - 50Hz

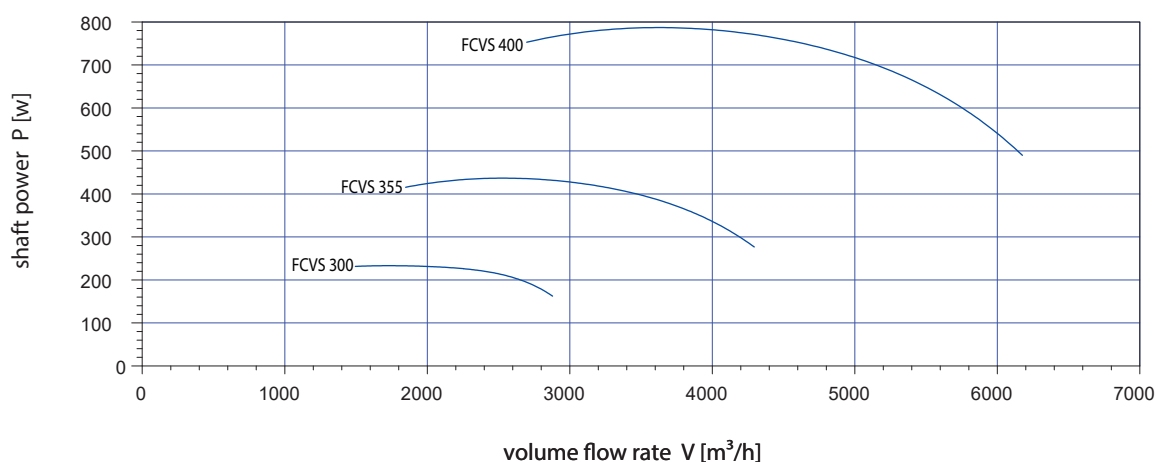
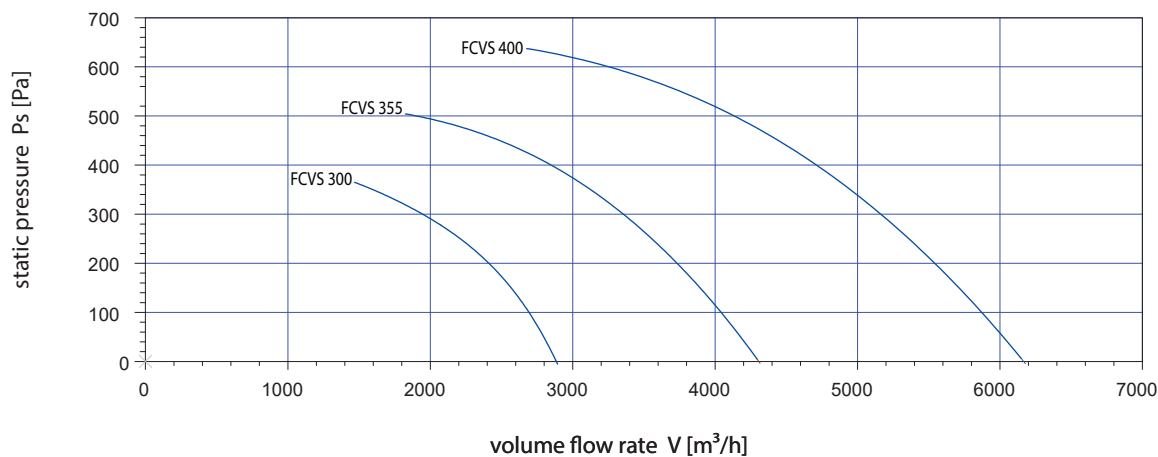
Model	Q (CMH)	Type of motor	Max Power (watts)	A (amp)	V/P/Hz	IP/CL
FCVS 630-4 Pole	2900	IEC	5500	8.5	415/3/50	55/F
FCVS 630-6 Pole	2900	IEC	1500	7.3	240/1/50	55/F
FCVS 710-6 Pole	4300	IEC	3000	4.6	415/3/50	55/F
FCVS 800-6 Pole	6200	IEC	5500	8.5	415/3/50	55/F

For actual motor rating check either with factory or motor data.

Above motor data subject to change after performance

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Direct drive 4 Pole - 60Hz



## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
Model	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A) @ 3m)
FCVS 300	83.4	74.2	68.8	75.1	70.2	68.6	68.4	64.6	85	48
FCVS 355	72.2	68.1	81.4	76.3	75	70.4	72.3	63.7	84	60
FCVS 400	75.8	71.7	85	79.9	78.6	74	75.9	67.3	88	64

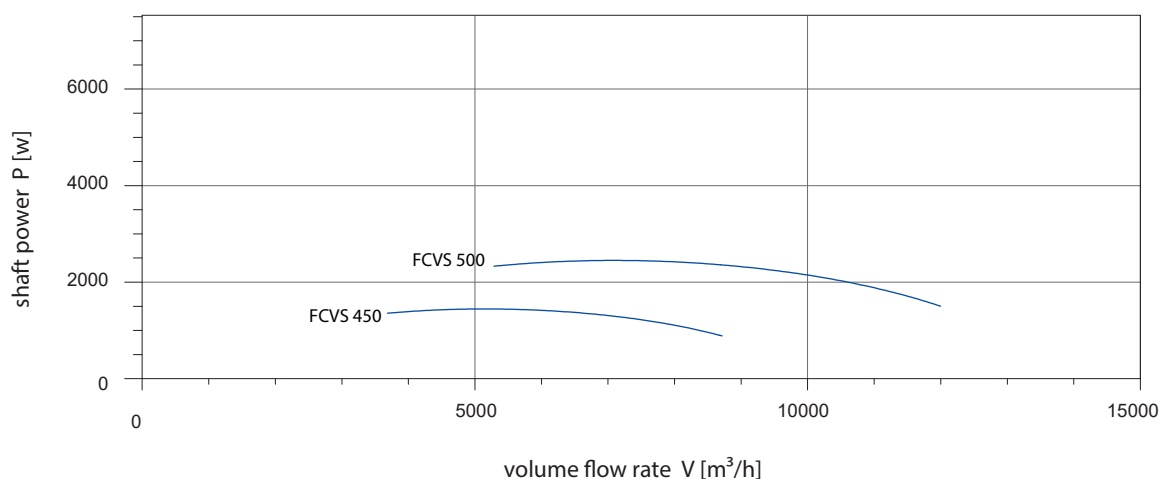
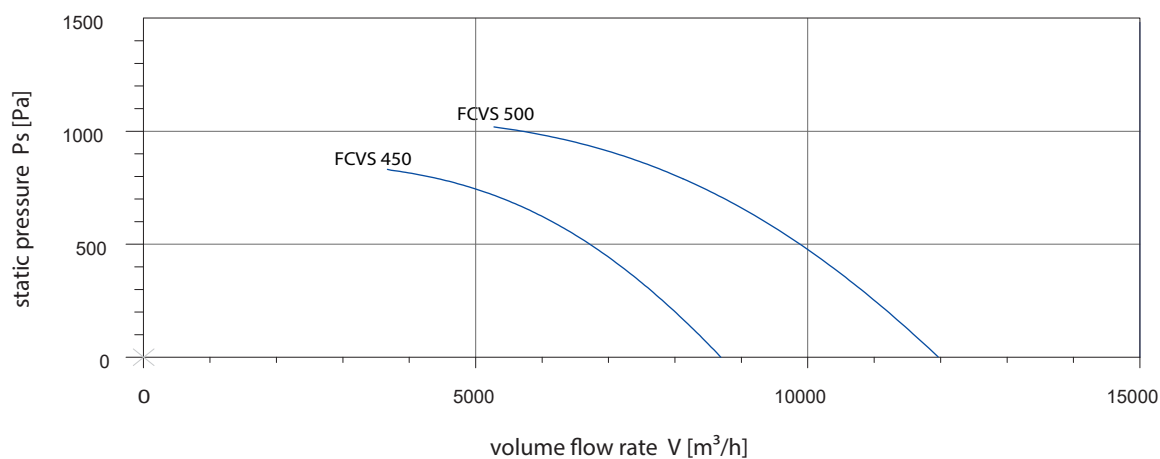
## 4 Pole - 60Hz

Model	Q (CMH)	Type of motor	Max Power (watts)	A (amp)	V/P/Hz	IP/CL
FCVS 300	2900	ODP	370	4.9	240/1/60	IP21/F
FCVS 355	4300	ODP	550	8	240/1/60	IP21/F
FCVS 400	6200	ODP	1100	9.6	240/1/60	IP21/F

Above motor data subject to change after performance

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Direct drive 4 Pole - 60Hz



## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
Model	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A) @ 3m)
FCVS 450	79.4	75.3	88.6	83.4	82.1	77.5	79.4	70.9	91	67
FCVS 500	82.6	78.2	91.8	86.7	85.4	80.8	82.7	74.1	95	70

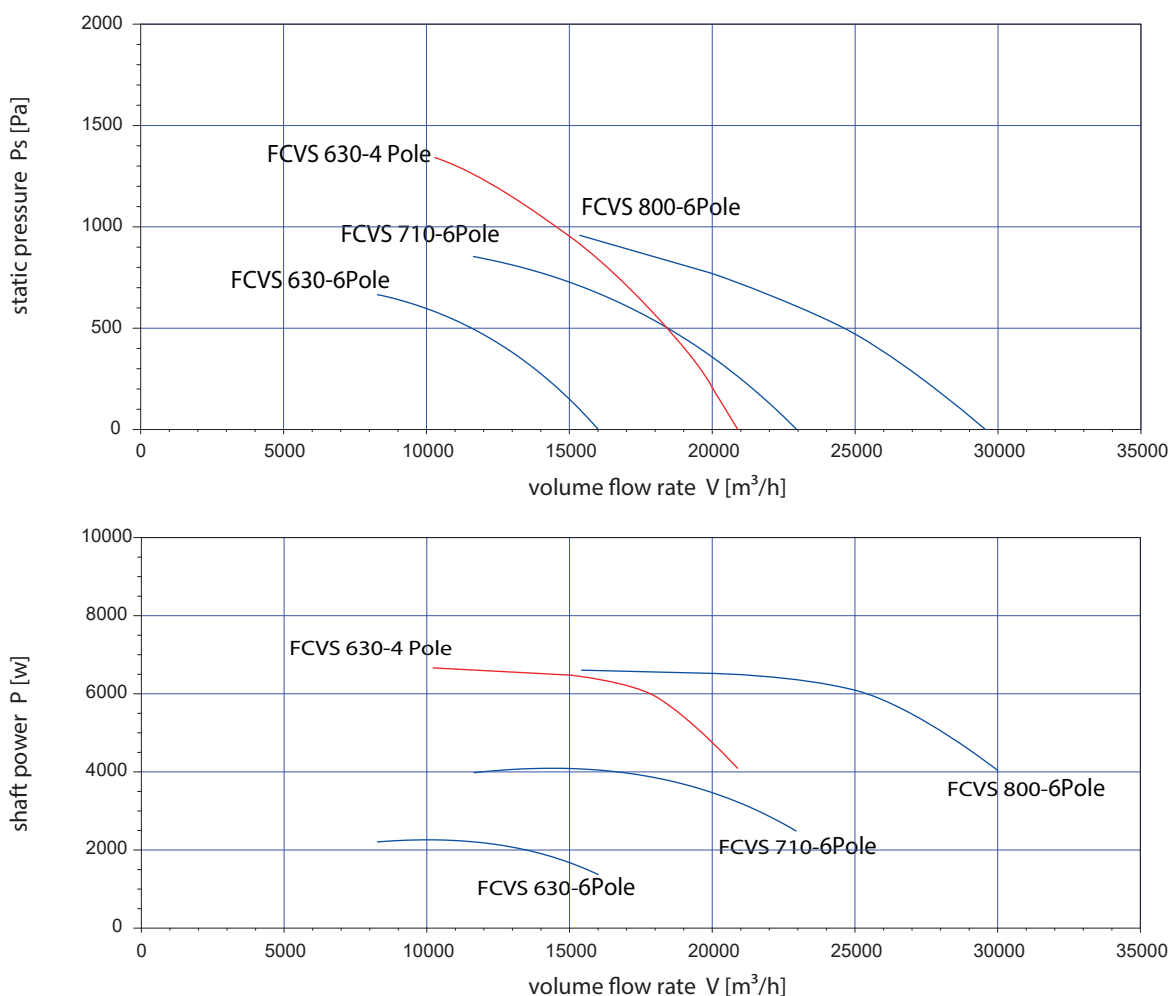
## 4 Pole - 60Hz

Model	Q (CMH)	Type of motor	Max Power (watts)	A (amp)	V/P/Hz	IP/CL
FCVS 450	8900	ODP	2200	4.89	380/3/60	IP21/F
FCVS 500	12000	ODP	3700	7.2	380/3/60	IP21/F

Above motor data subject to change after performance

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Direct drive 4 & 6 Pole - 60Hz



## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
Model	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
FCVS 630-4 Pole	99.3	105.8	101.9	98.4	93.2	89.1	83.5	77	109	80
FCVS 630-6 Pole	89.8	97.5	93.2	89.4	83.8	80	74.3	68	100	71
FCVS 710-6 Pole	93.8	100.4	96.5	92.9	87.7	83.7	78	71.5	103	74
FCVS 800-6 Pole	97.3	103.4	99.9	96.5	91.5	87.5	81.8	75.2	106	78

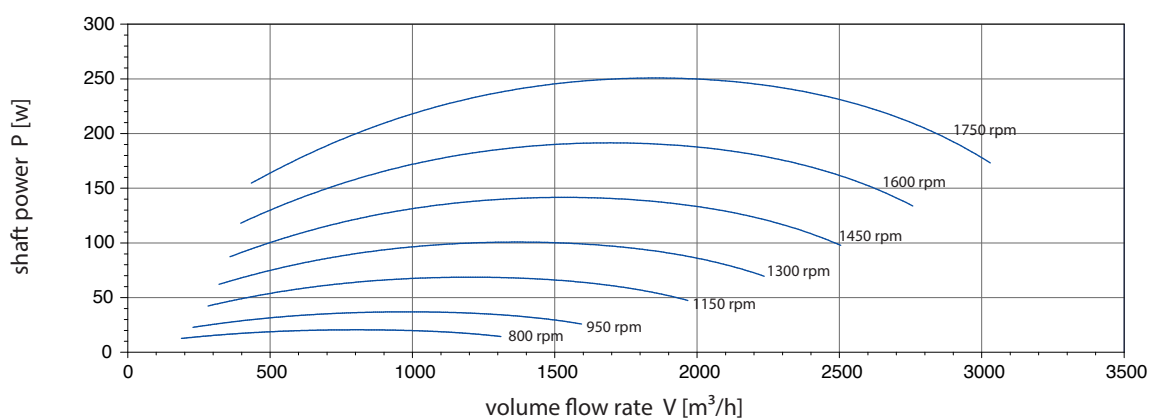
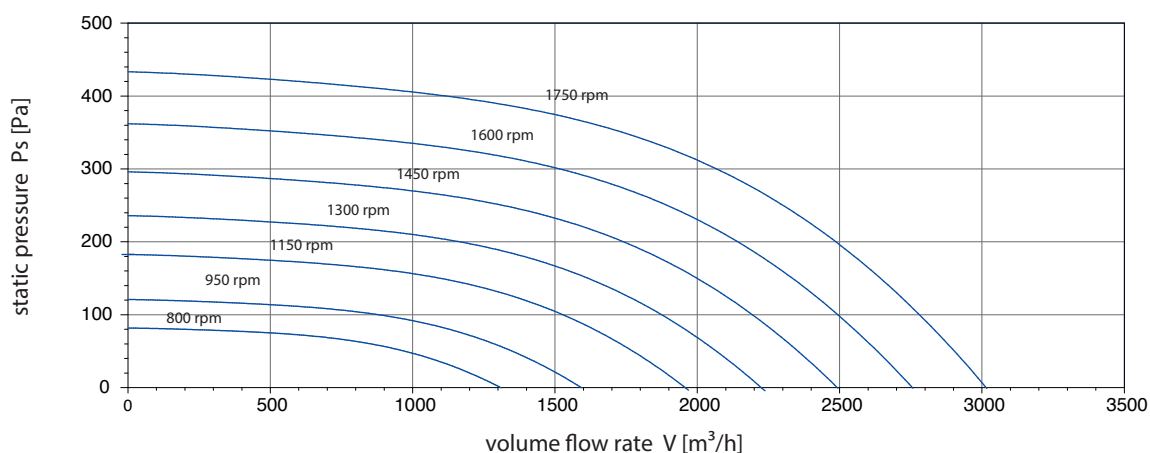
4&6 Pole - 60Hz						
Model	Q (CMH)	Type of motor	Max Power (watts)	A (amp)	V/P/Hz	IP/CL
FCVS 630-4 Pole	2900	IEC	7500	12.7	380/3/60	55/F
FCVS 630-6 Pole	2900	IEC	3000	5.1	380/3/60	55/F
FCVS 710-6 Pole	4300	IEC	5500	9.3	380/3/60	55/F
FCVS 800-6 Pole	6200	IEC	7500	12.7	380/3/60	55/F

For actual motor rating check either with factory or motor data.

Above motor data subject to change after performance

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

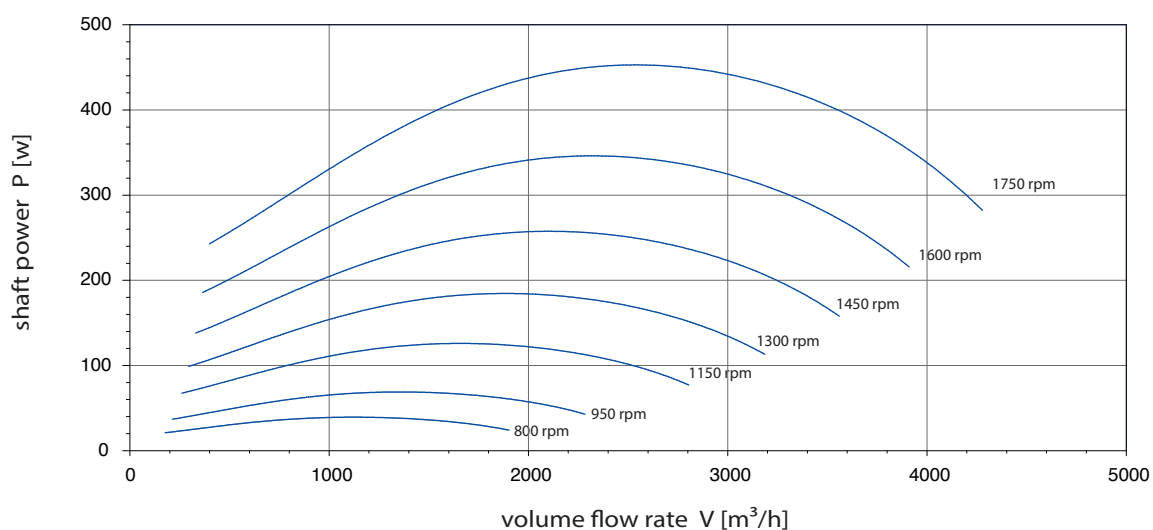
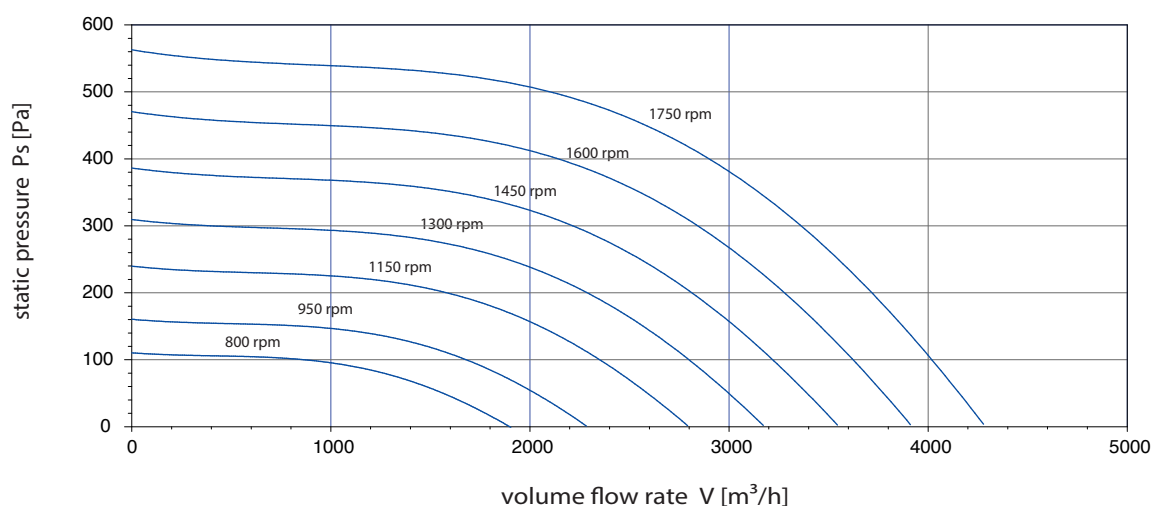


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
800	66.7	54.6	56.1	62.8	58.6	57.2	57.6	57.3	70	45
950	70.2	61	55.5	61.9	56.9	55.3	55.1	51.2	72	43
1150	74.1	65.7	59.6	68.2	60.8	58.8	57.4	51.7	76	48
1300	76.9	69.1	64	72.5	63.9	61.8	59.8	53.8	79	51
1450	80.1	71.8	67.7	76.2	66.8	64.5	62.2	56.3	82	55
1600	82.6	74.1	72	80.7	69.6	67.3	64.7	59	86	59
1750	84.7	76.1	75.5	84.4	72	69.5	66.8	61.2	88	62

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

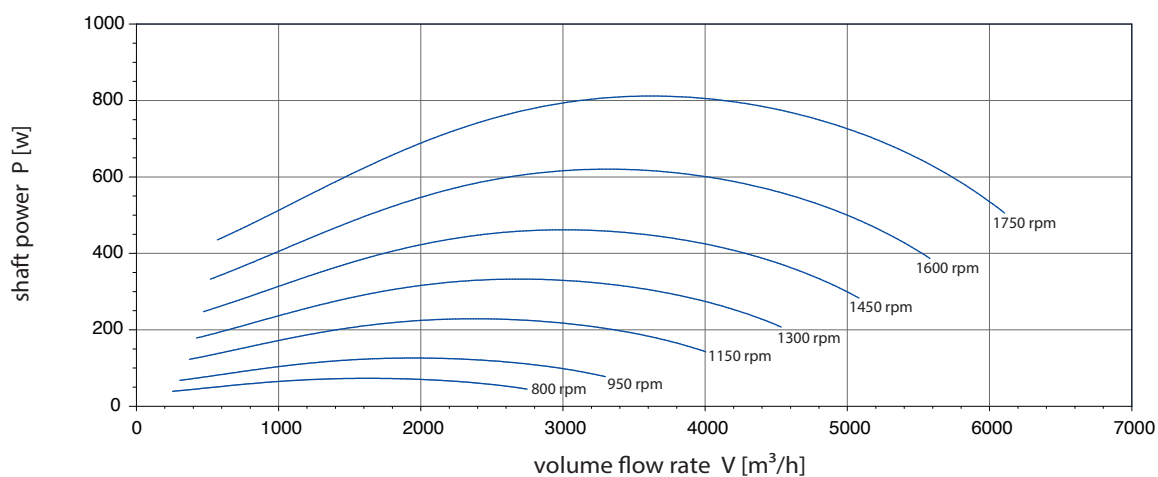
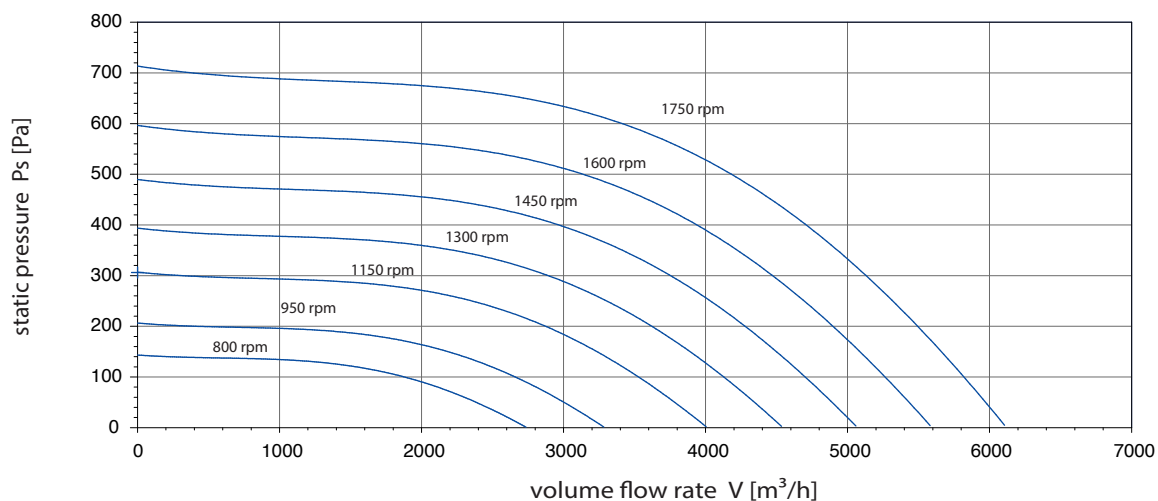


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
800	54.5	53	63.4	63.9	63.6	60.1	66.5	52.1	71	50
950	59	54.9	68.2	63	61.8	57.2	59.1	50.5	71	47
1150	63.8	57.8	70.7	65.1	63.9	59.4	57.1	52.4	73	48
1300	65.3	60.8	70.8	67.4	66.3	62	59.1	54.6	77	51
1450	68.6	64.1	79.6	70.1	68.7	64.6	61.5	57.1	81	55
1600	71.1	68.1	84.5	73.2	71.2	67.2	63.9	59.4	85	58
1750	72.8	71.8	88.8	76.1	73.5	69.4	66	61.4	89	62

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

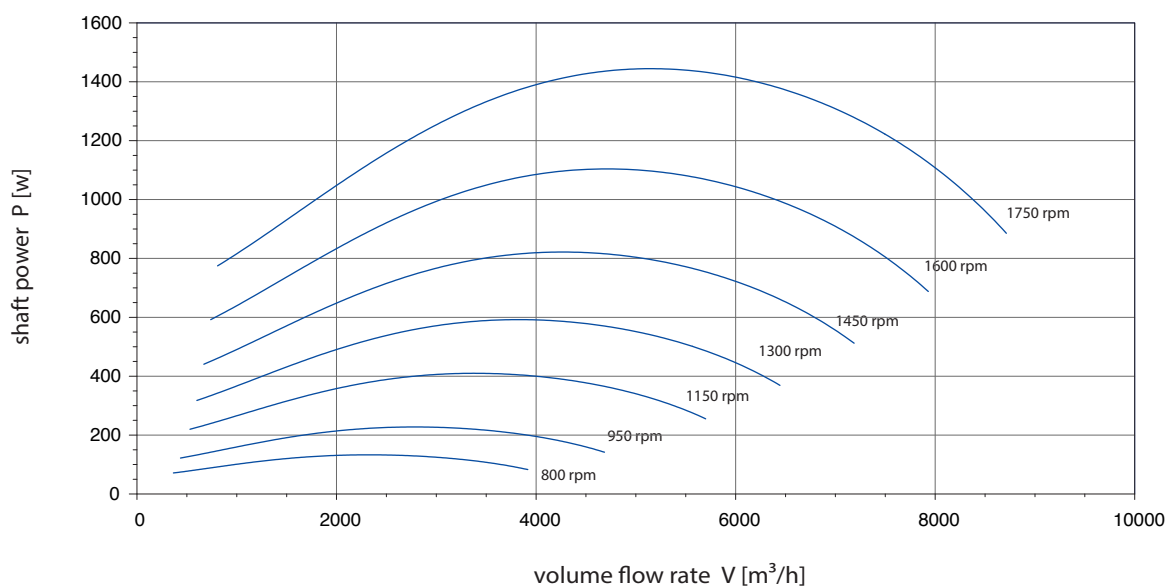
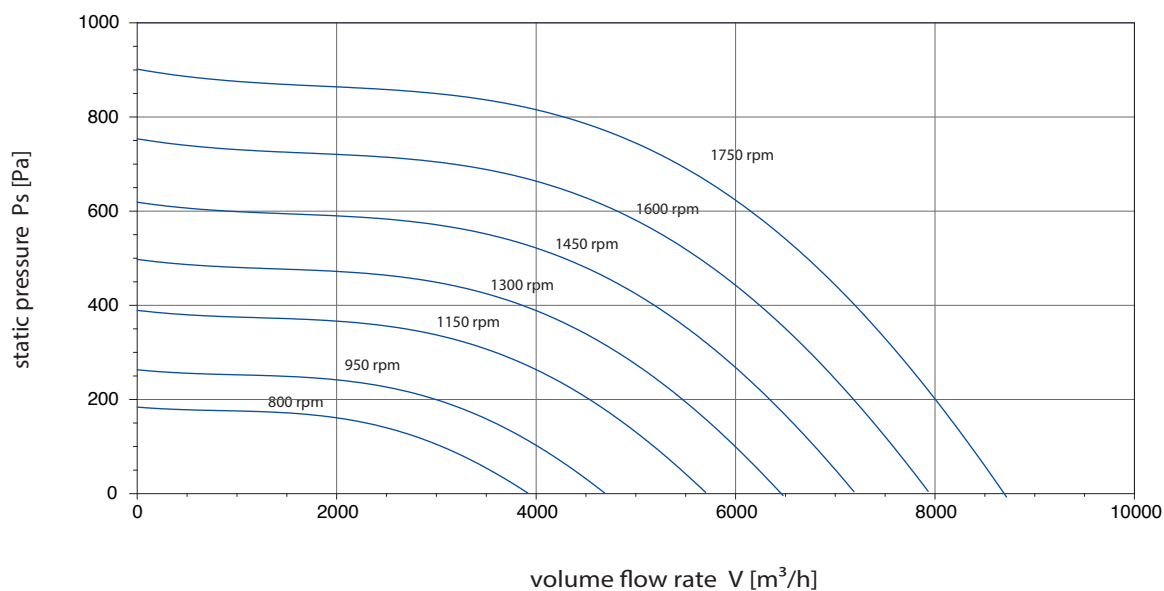


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
800	58.1	56.6	67.1	67.4	67.2	63.7	70.1	55.7	75	53
950	62.6	58.6	71.9	66.7	65.5	61	63	54.2	75	50
1150	67.5	61.4	74.3	68.8	67.5	63	60.8	56.1	77	52
1300	69.1	64.3	78.2	70.9	69.9	65.6	62.7	58.2	80	55
1450	72	67.6	82.9	73.7	72.3	68.2	65.1	60.6	84	58
1600	74.7	71.5	87.7	76.7	74.8	70.7	67.5	63	89	62
1750	76.5	75.2	92.2	79.6	77.1	73	69.6	65	93	65

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz



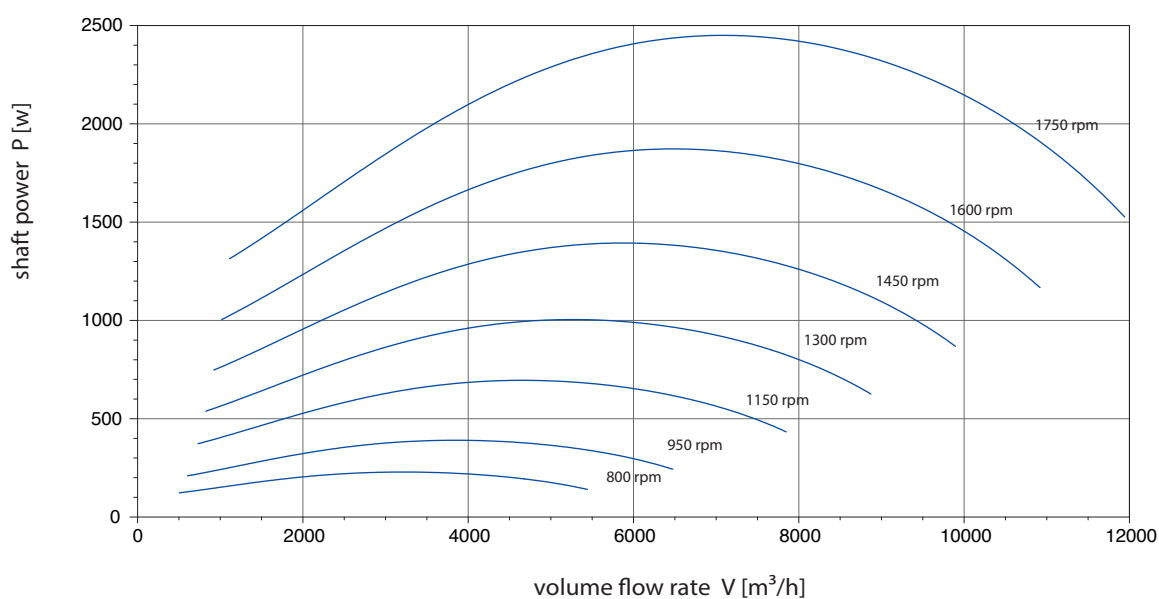
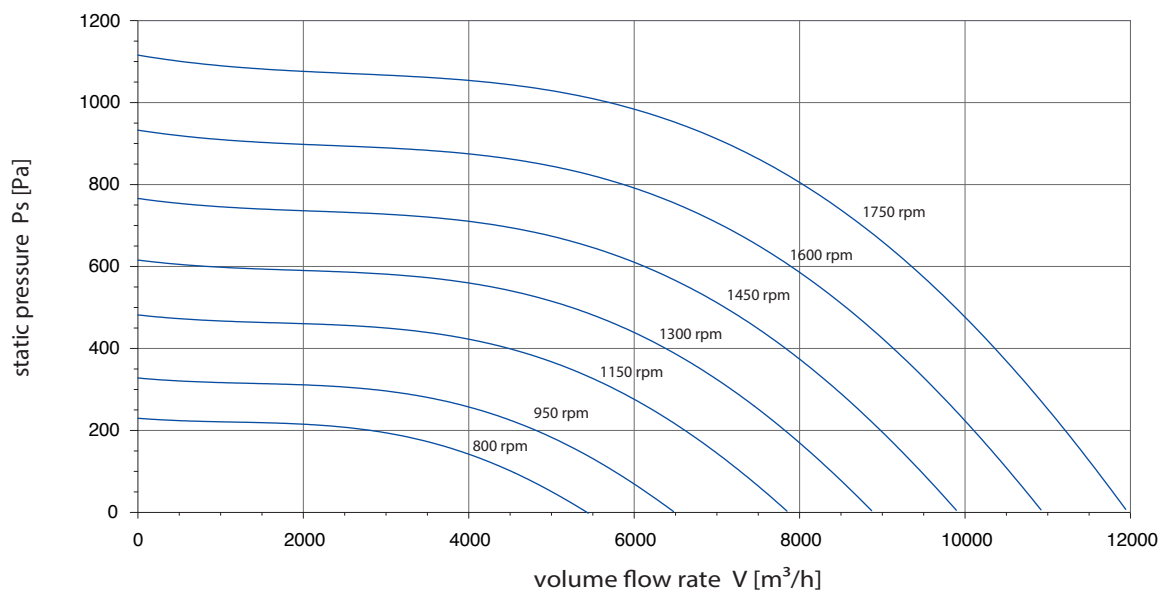
## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
800	61.7	60	70.9	70.8	70.6	67.2	73.4	59	78	57
950	66.1	62.7	75.4	70.2	69	64.4	66.3	57.7	78	54
1150	71	65	77.8	72.3	71.1	66.6	64.3	59.6	81	56
1300	72.7	67.9	81.7	74.5	73.4	69.2	66.2	61.8	84	58
1450	75.6	71.2	86.5	77.3	75.8	71.7	68.7	64.2	88	62
1600	78.3	75	91.3	80.2	78.3	74.3	71.1	66.5	92	65
1750	80	78.8	95.7	83.1	80.6	76.5	73.2	68.6	96	69

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.



## Belt drive - 50Hz/60Hz

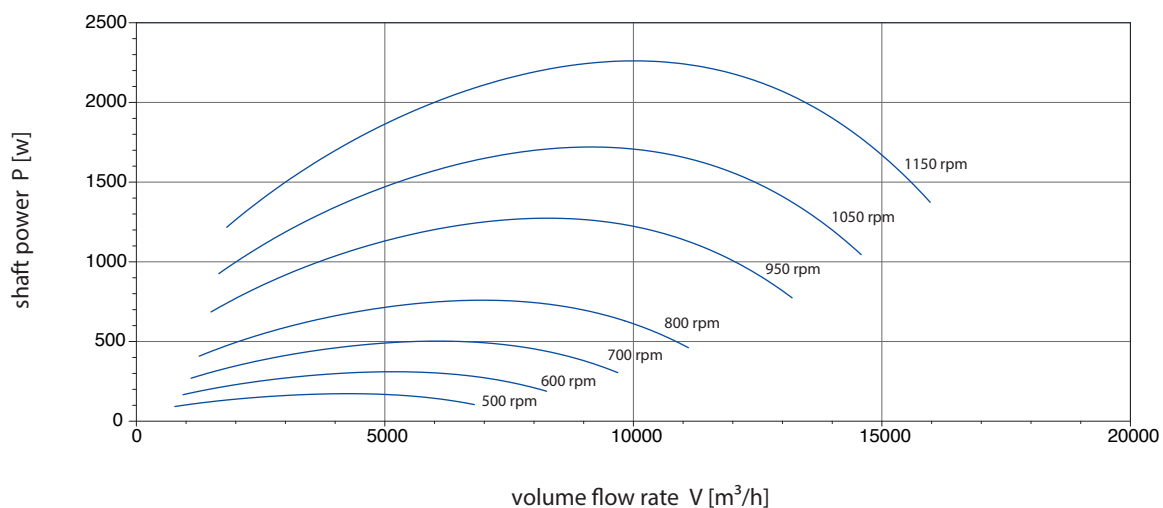
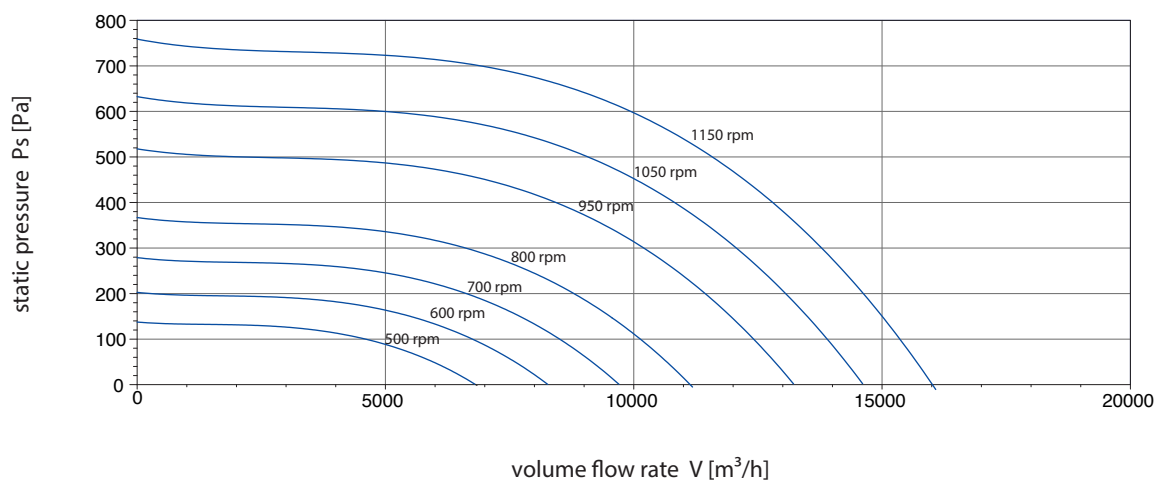


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
800	64.9	63.4	73.9	74.2	74	70.5	76.9	62.5	82	60
950	69.4	65.4	78.8	73.5	72.4	68	70	61.1	82	57
1150	74.4	68.3	81	75.6	74.4	69.9	67.7	63	84	59
1300	76.2	71.1	84.6	77.6	76.6	72.4	69.5	65	87	61
1450	78.6	74.3	89.5	80.5	79.1	74.9	71.9	67.4	91	65
1600	81.6	78	94.2	83.4	81.5	77.4	74.3	69.7	95	68
1750	83.3	81.8	98.6	86.3	83.8	79.7	76.4	71.8	99	72

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

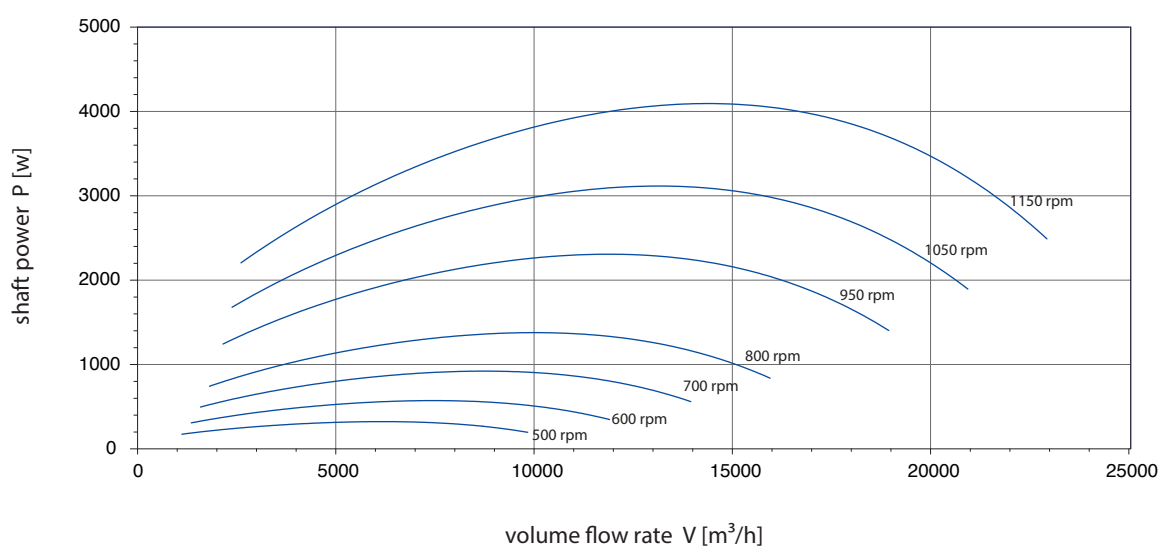
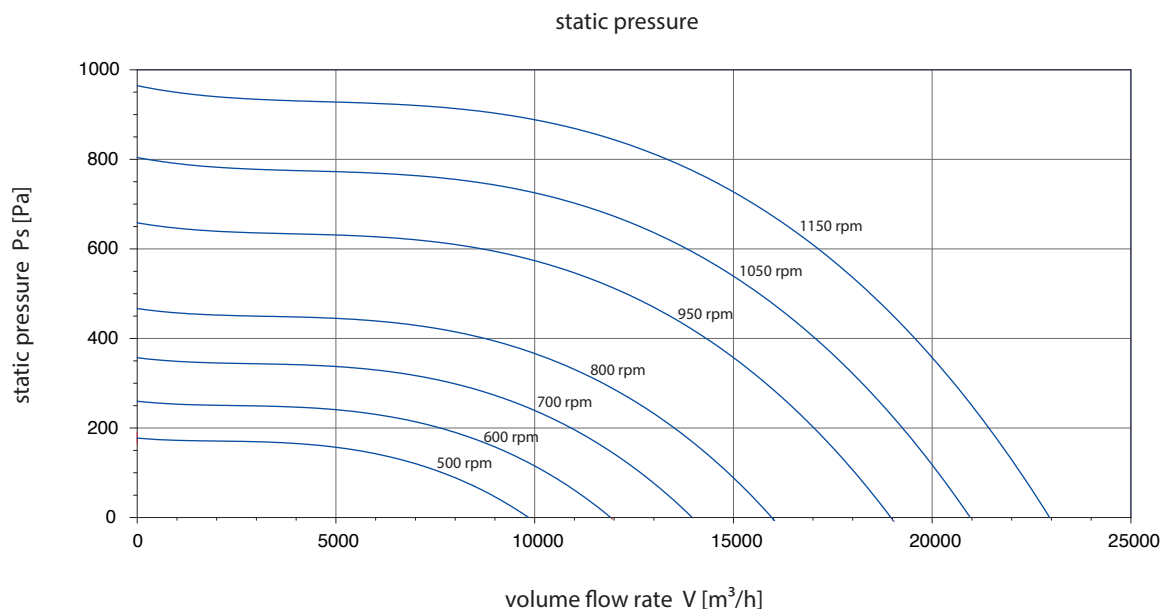


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
500	73.2	69.1	75.6	73.9	69.8	77.7	72.2	55.8	82	60
600	73.7	72.3	82.4	75.1	68.7	71.1	61.3	55	84	58
700	74.3	75.2	82	77.2	70.4	70.2	63.1	56.6	85	58
800	76.7	80.2	83.8	79.2	73.2	71.5	65.8	59.5	87	61
950	80.2	89.2	87.4	82.3	76.7	73.7	69.6	63.9	92	64
1050	82.6	93.5	90.3	84.9	79.2	76.3	72	66.3	96	67
1150	84.8	97	92.9	87.3	81.4	78.7	74.2	68.4	99	69

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

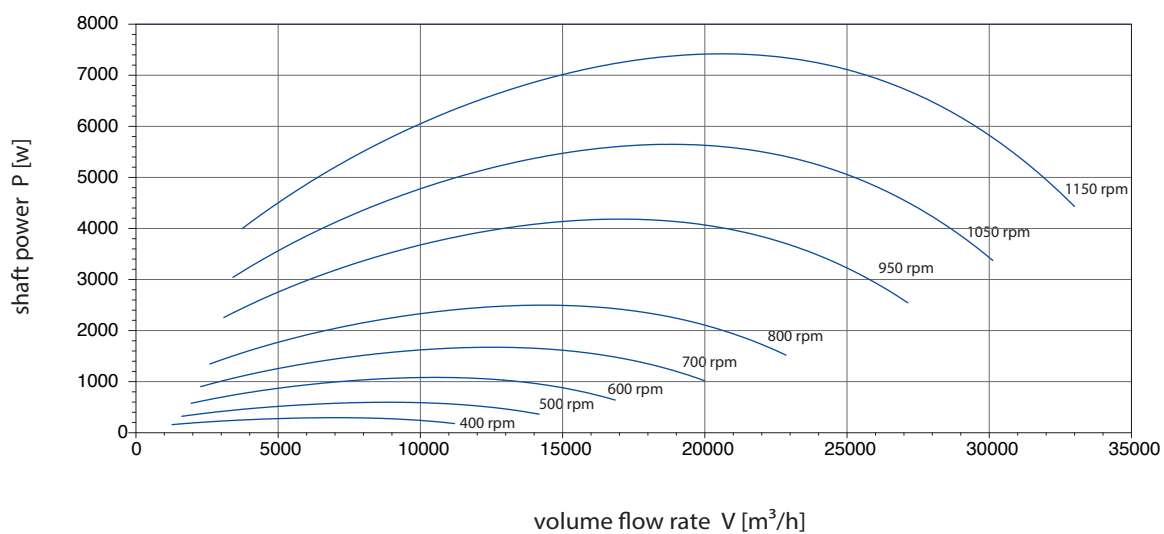
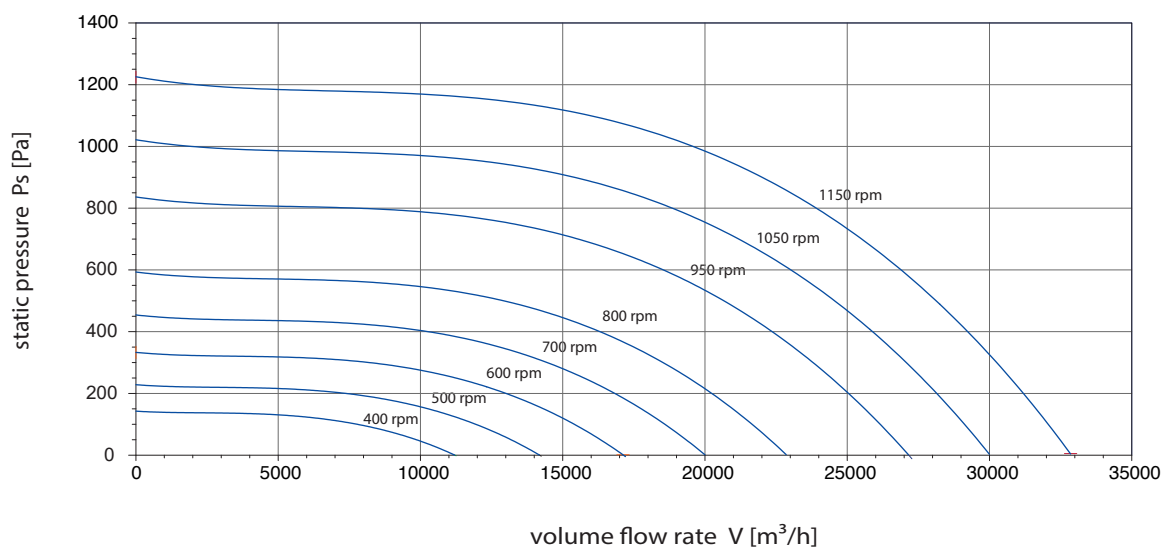


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
500	76.8	72.7	79.3	77.5	73.5	81.3	75.8	59.4	86	64
600	77.4	76	86.2	78.7	72.4	74.9	65	58.7	88	62
700	77.9	78.8	85.7	80.8	74.1	73.9	66.8	60.3	88	62
800	80.3	83.7	87.6	83	76.8	75.2	69.4	63.1	91	64
950	83.9	92.6	91.1	85.9	80.4	77.4	73.3	67.5	96	68
1050	86.2	97	93.9	88.5	82.8	79.9	75.7	69.9	100	71
1150	88.4	100.5	96.5	90.9	85	82.3	77.9	72.1	103	73

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

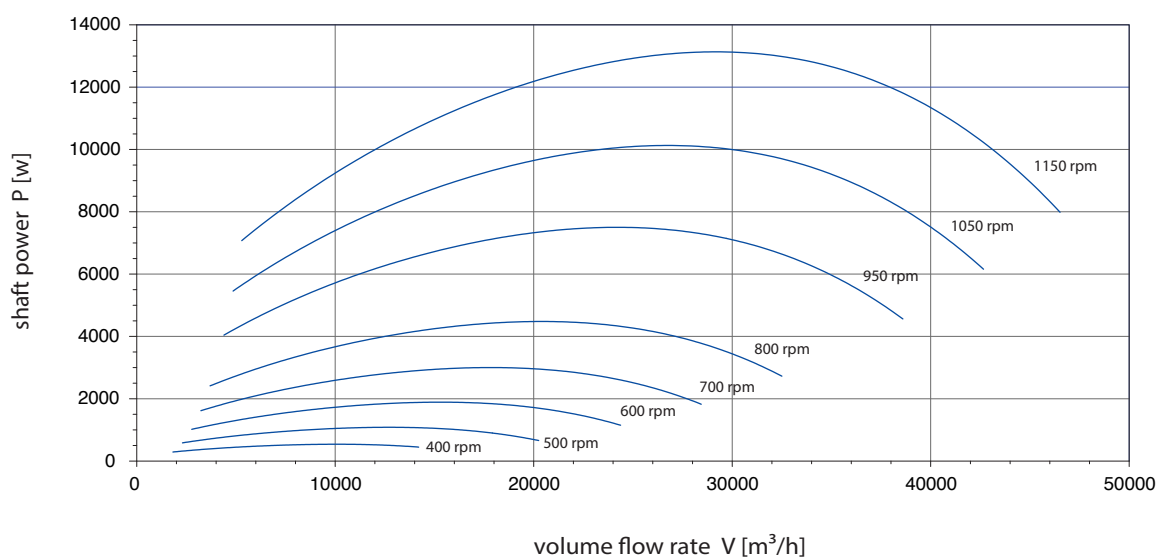
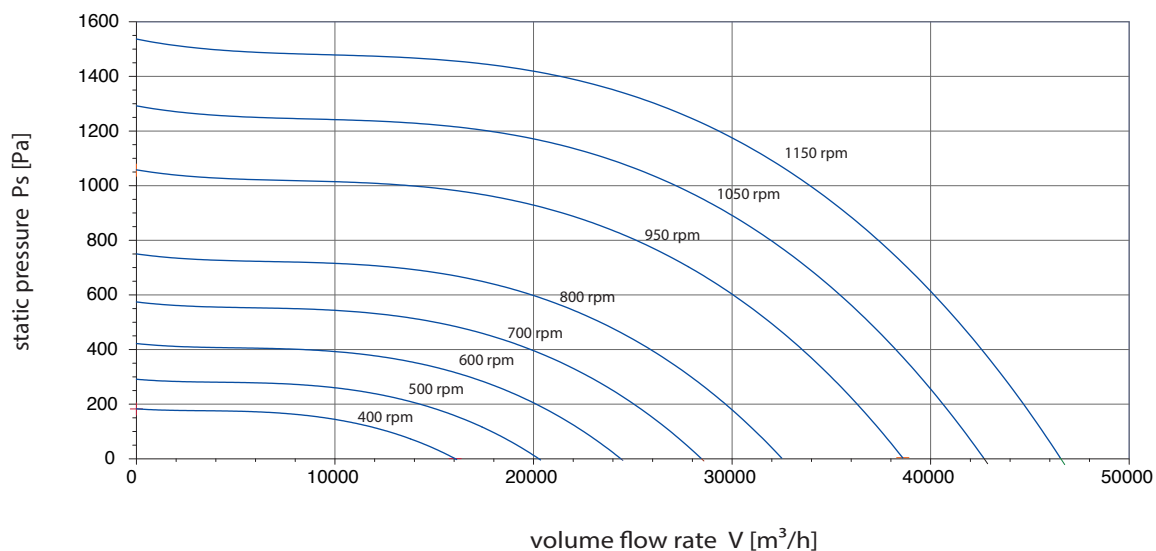


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
400	75.6	71.5	78.1	76.3	72.3	80.1	74.6	58.2	85	63
500	76.1	75.2	84	77.9	71.3	73	64	57.7	86	60
600	77.9	79.9	85.7	80.8	74.4	72.9	66.8	60.4	88	62
700	81	87.1	87.7	83.1	77.4	75.3	70.3	64.3	92	65
800	83.8	93.9	91.3	86	80.4	77.3	73.3	67.5	97	68
950	88	100.6	96.3	90.5	84.6	82	77.4	71.6	103	73
1050	91.4	103.7	98.8	93.3	87.3	84.5	79.7	73.8	106	76
1150	94.7	106.3	101	95.8	89.8	86.7	81.8	75.7	108	78

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

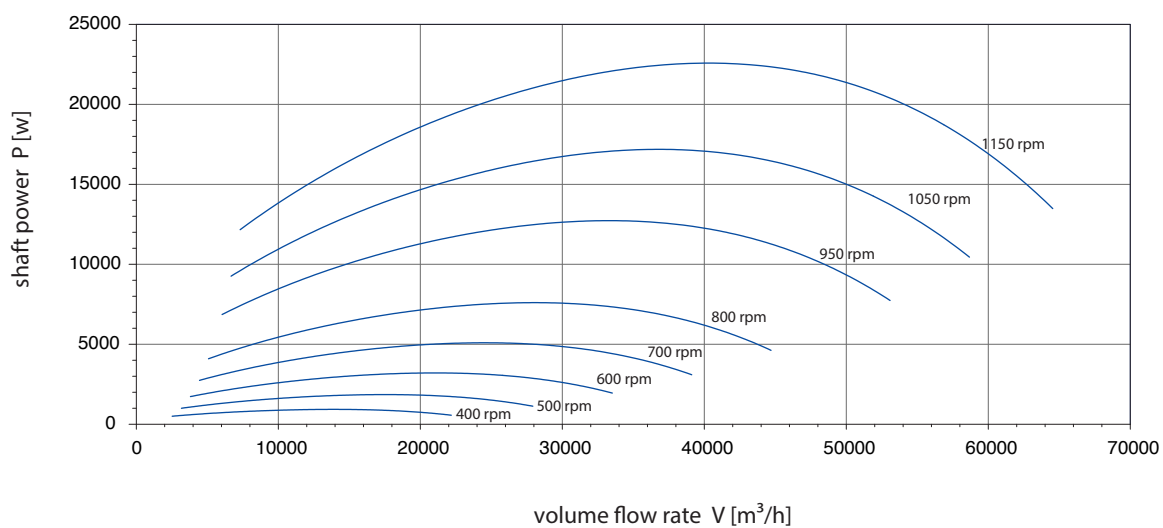
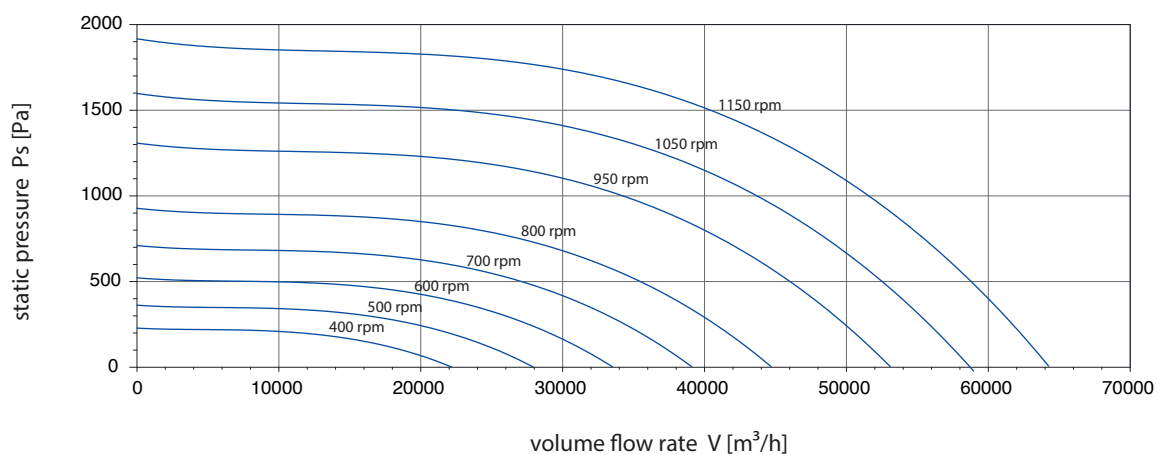


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
400	79.2	75.1	81.6	79.9	75.9	83.7	78.2	61.8	88	66
500	79.7	78.8	87.7	81.5	74.9	76.7	67.6	61.3	90	64
600	81.5	83.4	89.3	84.4	78	76.6	70.3	64	92	66
700	84.5	90.4	91.3	86.7	81	79	73.9	67.8	95	68
800	87.4	97.3	97.8	89.5	84	80.9	76.8	71.1	100	71
950	91.5	104.1	99.8	94.1	88.2	85.6	81	75.2	106	76
1050	94.9	107.2	102.4	96.8	90.8	88.1	83.3	77.3	109	79
1150	98	109.6	104.4	99.2	93.2	90.1	85.2	79.1	111	81

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## Belt drive - 50Hz/60Hz

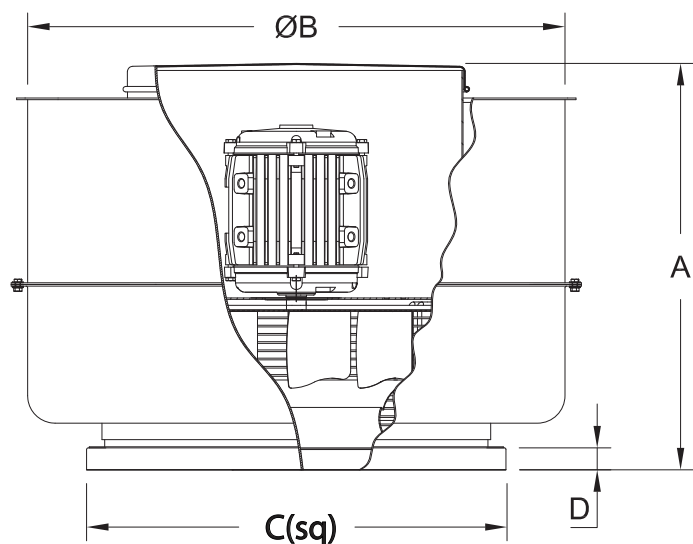


## Sound Data

Sound Power Level (Fan), dB - Octave Band Centre Frequency, Hz										
RPM	63	125	250	500	1000	2000	4000	8000	Total	Lp A(dB(A)) @ 3m
400	82.3	78.3	84.9	83.1	79	86.9	81.2	65	92	70
500	83	82.1	91	84.7	78.2	80	70.8	64.5	93	67
600	84.7	86.6	92.5	87.7	81.2	79.9	73.6	71	95	69
700	87.7	93.5	94.5	89.9	84.2	82.2	77.1	71	99	71
800	90.6	100.5	98	92.7	87.2	84.1	80	74.3	103	75
950	94.8	107.2	103	97.3	91.4	88.8	84.2	78.4	109	80
1050	98.1	110.4	105.6	100	94	91.3	86.5	80.6	112	82
1150	101.4	113	107.8	102.5	96.5	93.5	88.6	82.5	115	85

Fans are tested in accordance with AMCA 210 for airflow and AMCA 300 for sound performance rating.

## FCVS Direct & Belt Drive Dimension Details



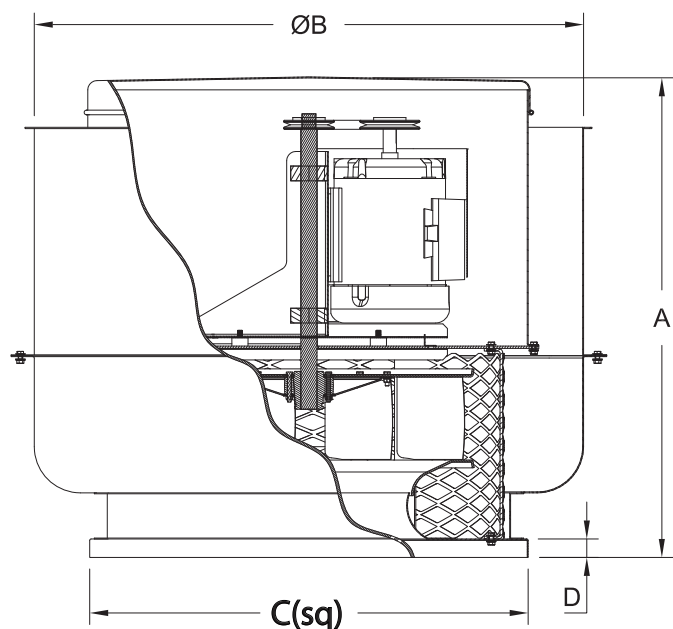
Models FCVS - D

Model No	A	B	C(sq)	D	Weight(Kg)*	Damper size (sq)
FCVS 300	559	710	600	40	31	395
FCVS 355	575	780	660	40	39	395
FCVS 400	609	850	700	40	52	555
FCVS 450	741	980	780	40	66	555
FCVS 500	765	1050	830	40	85	555
FCVS 630	971	1190	950	40	98	850
FCVS 710	1188	1350	1100	40	114	850
FCVS 800	1322	1484	1160	50	132	1000

All dimension's are in 'mm'

\*Approximate weight without motor.

For actual fan dimensions check with factory.



Models FCVS - B

Model No.	A	B	C(sq)	D	Weight(Kg)*	Damper size (sq)
FCVS 300	664	710	600	40	42	395
FCVS 355	679	780	660	40	49	395
FCVS 400	688	850	700	40	57	555
FCVS 450	821	980	780	40	75	555
FCVS 500	872	1050	830	40	94	555
FCVS 630	1041	1190	950	40	136	850
FCVS 710	1258	1350	1100	40	204	850
FCVS 800	1392	1484	1160	50	295	1000
FCVS 900	1515	1650	1370	50	365	1000
FCVS 1000	1593	1700	1410	50	429	1200

All dimension's are in 'mm'

\*Approximate weight without motor.

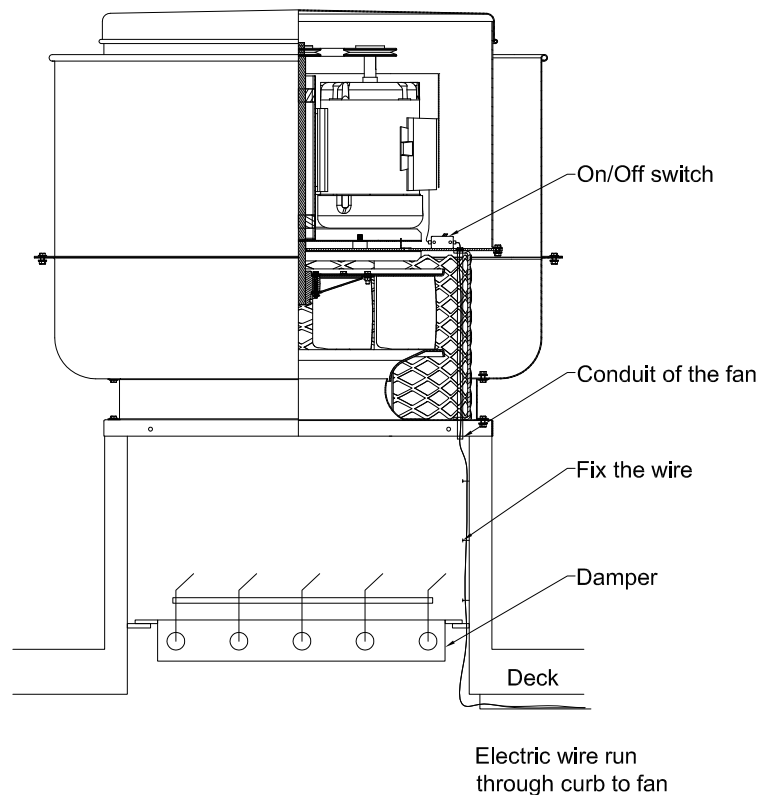
## Roof Fan Upblast - Belt

The roof opening size shall be provided to the contractor at early stage when the roof is under construction.

### Roof Curb Fabrication

The contractor is the only party who is responsible for the fabrication and procedures to make a roof curb, the attached drawing is for reference only. The thickness of curb wall shall be different according to the material. The concrete wall shall be between 70-80mm, steel structure shall be between 30-45mm.

As to the metal where the fan contact the curb in the top, a linear rubber vibration isolation pad shall be applied, also acts as seal. The thickness of the pad shall be decided according to the fan weight, and the hardness shall make sure it still maintain proper elasticity after fan is seated. The pad can be cut from typical carpet type isolation pads and are to be provided by contractors.



### How to Mount The Fan

Pull the fan curb, and fix it all four sides by self-tapping screw, as per attached drawing. The fan must be kept leveled.

### How To Mount The Back - Draft Damper.

Make sure the damper blades can be fully open to 90 degree when the fan starts, and shut down automatically by gravity after fan is stopped.

The dynamic weight of the fan while installation will differ than the actual weight. Dynamic load should be considered 25% extra on actual fan weight.



### General Clean Air

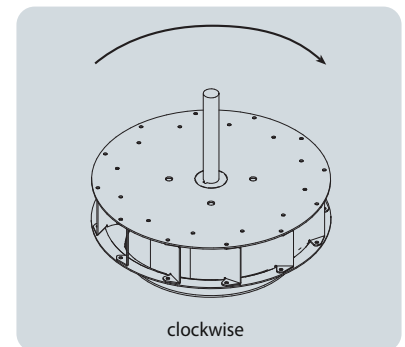
Models FCVS-D and FCVS-B exhaust fans are designed to meet the needs of general clean air applications. Tests were conducted to assure safe, rugged and reliable fans.

Due to the varying types of airstreams encountered in commercial ventilation, system designers must be aware of national, state, and local codes and guidelines governing these installations. Local code authorities should be consulted before proceeding with any ventilation project.

- When roofing materials extend to the top of the curb, roof curbs should be 1 inch (1 inch on each side) less than the unit curb cap to allow for roofing and flashing.
- For recommended duct size, damper size, and roof opening dimensions, refer to the performance data pages.
- Installation must include a means for inspecting, cleaning and servicing the exhaust fan

### Wheel Rotation

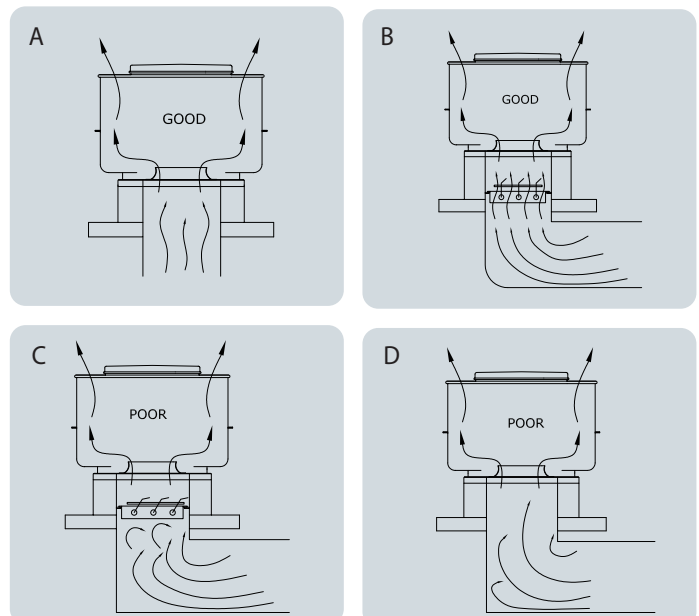
Direction of rotation is very critical. Rotation in the wrong direction will result in excessive horsepower, possible motor burnout, and increased noise levels. Check rotation by energizing the unit momentarily. The rotation should be the same as the rotation decals affixed to the unit and is clockwise when viewed from the top of the unit



### Fan Inlet Connections

In order to assure proper fan performance, caution must be exercised in fan placement and connection to the ventilation system. Obstructions, transitions, poorly designed elbows, improperly selected dampers, etc., can cause reduced performance, excessive noise, and increased mechanical stress. For performance to be as published, the system must provide uniform and stable airflow into the fan.

- A. Provide uniform airflow at fan inlet to assure optimum performance.
- B. Provide uniform airflow at fan inlet and through the damper to assure optimum performance.
- C. Dampers must open fully. Use motorized dampers in low airflow applications to reduce losses
- D. Avoid sharp turns or entrance conditions which cause uneven flow. Use turning vanes in elbows to reduce adverse effects.





Code: FCV5/01/17

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