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## VENTILATION PRODUCTS FOR POULTRY & LIVESTOCK APPLICATION

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Yarak Safe Deft

EXHAUST FAN SERIES

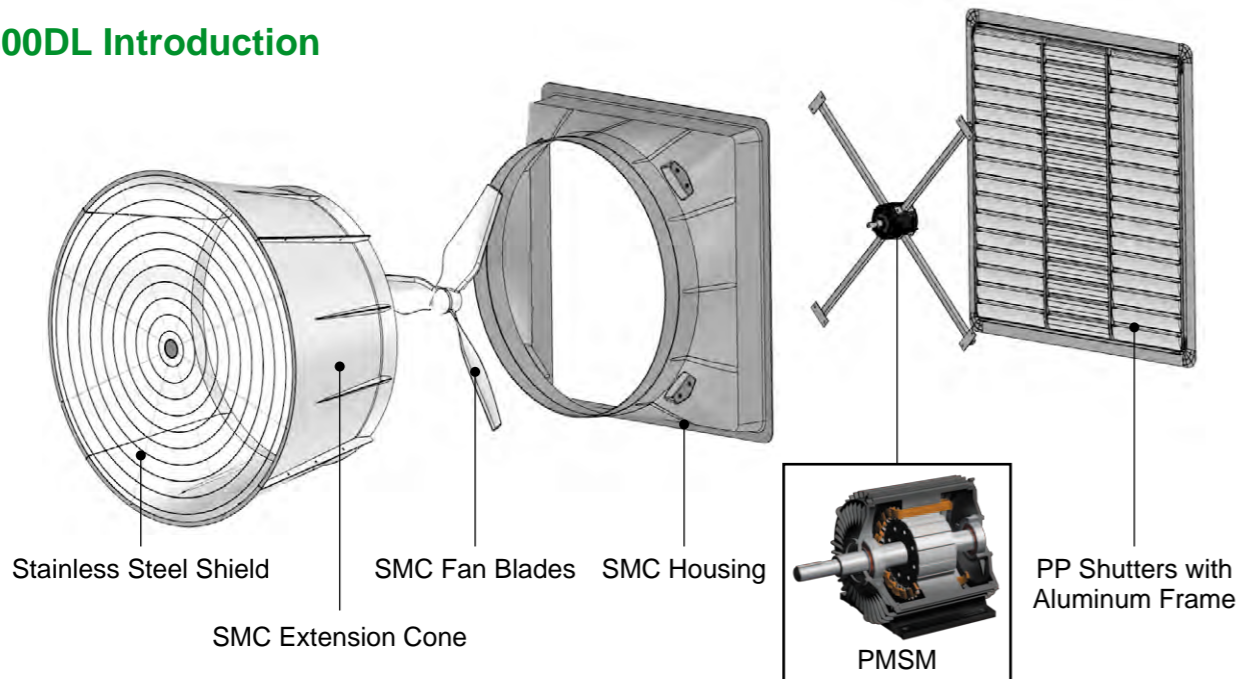
# K300DL



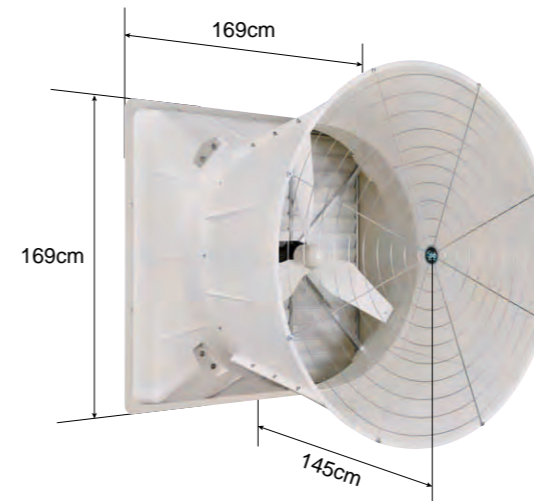
### K300DL Product Features

- 57" huge exhaust fan for animal farm house and factory use.
- High efficient and air volume but power saving.
- Strong SMC frame structure and fan blades.
- Permanent-magnet synchronous motor and AC motors are optional.

### K300DL Introduction



### Fan Dimensions



### Product Details

<b>Model</b>	57" K300DL
<b>External Frame</b>	SMC Fiberglass Housing
<b>Fan Blades</b>	57" 3 SMC Fiberglass Blades
<b>Motor</b>	1.5HP DC PMSM Grade F
<b>Number of Poles</b>	16 Poles
<b>Rotating Speed</b>	680 RPM
<b>Sound Volume</b>	79 dB (Detected from 3m near.)
<b>Voltage</b>	1 $\phi$ 220V, 60Hz (Optional)
<b>Current</b>	6 A
<b>Power Consumption</b>	1160 w/hr
<b>Air Volume</b>	55800 CMH
<b>Size</b>	L169xW145xH169 cm
<b>Weight</b>	114 kg





EXHAUST  
FAN  
SERIES

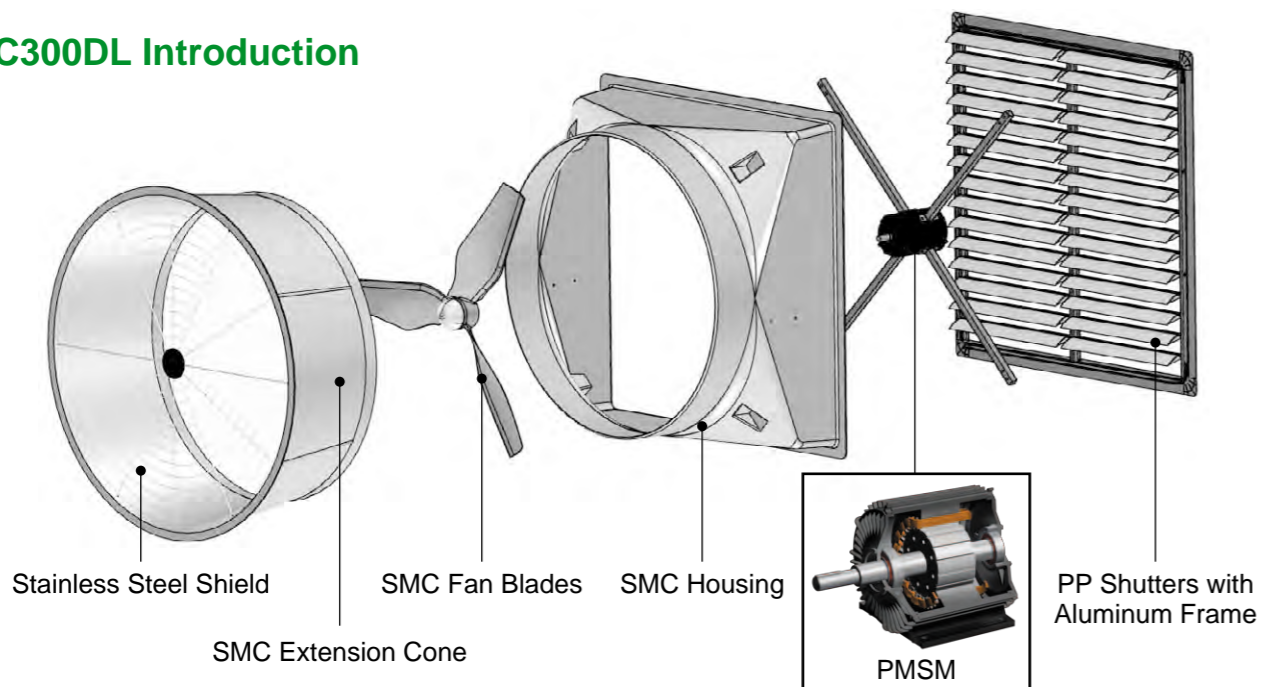
# N-C300DL

## N-C300DL Product Features

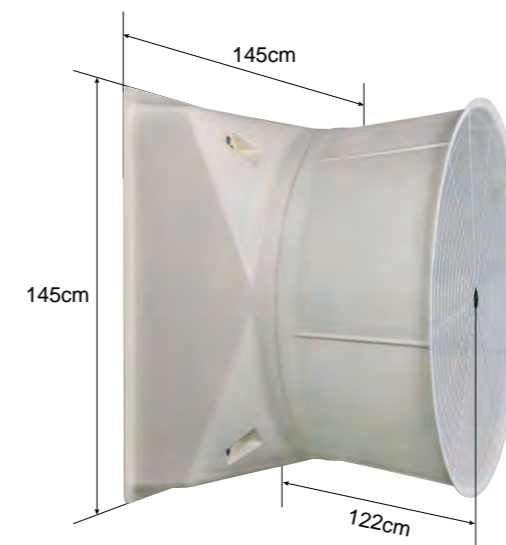
- 50" huge exhaust fan for animal farm house and factory use.
- High efficient and air volume but power saving.
- Strong SMC frame structure and fan blades.
- Permanent-magnet synchronous motor and AC motors are optional.



## N-C300DL Introduction



## Fan Dimensions



## Product Details

<b>Model</b>	50" N-C300DL
<b>External Frame</b>	SMC Fiberglass Housing
<b>Fan Blades</b>	50" 3 SMC Fiberglass Blades
<b>Motor</b>	1.5HP DC PMSM Grade F
<b>Number of Poles</b>	16 Poles
<b>Rotating Speed</b>	680 RPM
<b>Sound Volume</b>	75 dB (Detected from 3m near.)
<b>Voltage</b>	1 $\phi$ 220V, 60Hz (Optional)
<b>Current</b>	6 A
<b>Power Consumption</b>	848 w/hr
<b>Air Volume</b>	36900 CMH
<b>Size</b>	L145xW122xH145 cm
<b>Weight</b>	99 kg

University of Illinois Department of Agricultural and Biological Engineering  
Bioenvironmental and Structural Systems Lab  
Final Report

Project Number: 18487  
Test Date: October 2, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *K300DL*  
Blade dia.- *56.5"*  
Orifice dia.- *57.1"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *BLDC*  
Hp- *1100 W*  
RPM- *680*  
Volts- *220*  
Amps- *6*  
Hz- *50/60 Hz*  
Phase- *Single*  
S. F.- *-*

**Shutter:**  
Material- *none*  
# Doors- *-*  
# Columns- *-*  
Door length- *-*  
Location- *-*

**Guards:**  
Description- *wire*  
Spacing- *3.4" concentric*  
Location- *exhaust*

**Housing:**  
Material- *fiberglass*  
Intake area- *61.5" x 61.5"*  
Discharge- *57.1"*  
Depth- *25"*

**Discharge Cone:**  
Depth- *36.5"*  
Minor dia.- *57.1"*  
Major dia.- *70.5"*

Notes: \*Single phase, 60 Hz, 220 VAC input to speed controller. Controller set at maximum speed setting.  
\*No shutter.

Test Conditions:

T(wb) F: 67 Barometric pressure, recorded 29.41  
T(db) F: 79 Barometric Pressure, corrected 29.28 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	32900	676	219.9	5.86	1160	28.3	0	55800	48.1	21
0.05	31200	675	219.2	6.13	1249	24.9	12	52900	42.4	24
0.10	29400	674	219.2	6.38	1322	22.2	25	49900	37.8	26
0.15	27500	674	220.5	6.54	1380	19.9	37	46700	33.9	30
0.20	25700	674	220.5	6.66	1420	18.1	50	43600	30.7	33
0.25	23000	675	219.8	6.76	1453	15.8	62	39100	26.9	37
0.30	19700	675	220.3	6.72	1442	13.7	75	33500	23.2	43

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Final Report

Project Number: 18488  
Test Date: October 2, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *K300DL*  
Blade dia.- *56.5"*  
Orifice dia.- *57.1"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *BLDC*  
Hp- *1100 W*  
RPM- *680*  
Volts- *220*  
Amps- *-*  
Hz- *50/60 Hz*  
Phase- *Single*  
S. F.- *-*

**Shutter:**  
Material- *plastic w/ aluminum frame*  
# Doors- *16 per column*  
# Columns- *3*  
Door length- *17.9*  
Location- *intake*

**Guards:**  
Description- *wire*  
Spacing- *3.4" concentric*  
Location- *exhaust*

**Housing:**  
Material- *fiberglass*  
Intake area- *58.9" x 58.9"*  
Discharge- *57.1"*  
Depth- *25"*

**Discharge Cone:**  
Depth- *36.5"*  
Minor dia.- *57.1"*  
Major dia.- *70.5"*



Notes: \*Single phase, 60 Hz, 220 VAC input to speed controller. Controller set at maximum speed setting.

Test Conditions:

T(wb) F: 66 Barometric pressure, recorded 29.41  
T(db) F: 78.5 Barometric Pressure, corrected 29.28 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	30100	675	221.3	6.15	1259	23.9	0	51100	40.6	25
0.05	28500	675	219.4	6.37	1319	21.6	12	48400	36.7	27
0.10	26600	675	219.1	6.54	1372	19.4	25	45200	33	30
0.15	24600	675	220.4	6.62	1411	17.4	37	41700	29.6	34
0.20	22200	674	220.5	6.68	1429	15.6	50	37800	26.4	38
0.25	18500	675	220.6	6.63	1413	13.1	62	31400	22.2	45
0.30	13300	675	220.6	6.51	1377	9.7	75	22600	16.4	61

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Project Number: 18489  
Test Date: October 3, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *K300DL*  
Blade dia.- *56.5"*  
Orifice dia.- *57.1"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *BLDC*  
Hp- *1100 W*  
RPM- *730*  
Volts- *380*  
Amps- *2.9*  
Hz- *50/60 Hz*  
Phase- *Three*  
S. F.- *-*

**Shutter:**  
Material- *plastic w/ aluminum frame*  
# Doors- *16 per column*  
# Columns- *3*  
Door length- *17.9*  
Location- *intake*

**Guards:**  
Description- *wire*  
Spacing- *3.4" concentric*  
Location- *exhaust*

**Housing:**  
Material- *fiberglass*  
Intake area- *58.9" x 58.9"*  
Discharge- *57.1"*  
Depth- *25"*

**Discharge Cone:**  
Depth- *36.5"*  
Minor dia.- *57.1"*  
Major dia.- *70.5"*



Notes: \*Three phase, 50 Hz, 400 VAC input to motor drive.  
\*Dtech AC Motor drive. Model ADT-8760DRV

Test Conditions:

T(wb) F: 65 Barometric pressure, recorded 29.34  
T(db) F: 78 Barometric Pressure, corrected 29.21 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	32300	731	399.7	2.37	1546	20.9	0	54900	35.5	28
0.05	30800	731	399.8	2.47	1610	19.2	12	52400	32.5	31
0.10	29400	731	400.0	2.56	1669	17.6	25	49900	29.9	33
0.15	27700	731	400.2	2.63	1715	16.1	37	47000	27.4	36
0.20	25600	737	400.2	2.70	1760	14.5	50	43400	24.7	41
0.25	23300	731	400.2	2.71	1771	13.1	62	39500	22.3	45
0.30	20700	731	400.3	2.68	1750	11.8	75	35200	20.1	50

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Bioenvironmental and Structural Systems Lab  
Final Report

Project Number: 18490  
Test Date: October 3, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *K300DL*  
Blade dia.- *56.5"*  
Orifice dia.- *57.1"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *AC-AEVE*  
Hp- *2 (1.5 kW)*  
RPM- *700*  
Volts- *220-240 / 380-415*  
Amps- *6.2-6.1 / 3.6-3.5*  
Hz- *50*  
Phase- *3*  
S. F.- *-*

**Shutter:**  
Material- *plastic w/ aluminum frame*  
# Doors- *16 per column*  
# Columns- *3*  
Door length- *17.9*  
Location- *intake*

**Guards:**  
Description- *wire*  
Spacing- *3.4" concentric*  
Location- *exhaust*

**Housing:**  
Material- *fiberglass*  
Intake area- *58.9" x 58.9"*  
Discharge- *57.1"*  
Depth- *25"*

**Discharge Cone:**  
Depth- *36.5"*  
Minor dia.- *57.1"*  
Major dia.- *70.5"*



Notes: \*50 Hz test

Test Conditions:

T(wb) F: 65 Barometric pressure, recorded 29.33  
T(db) F: 77 Barometric Pressure, corrected 29.20 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	30600	704	400.3	3.48	1608	19.0	0	51900	32.3	31
0.05	28900	702	400.2	3.54	1661	17.4	12	49100	29.6	34
0.10	27100	700	400.3	3.59	1696	16.0	25	46100	27.2	37
0.15	25000	699	400.4	3.62	1731	14.5	37	42500	24.6	41
0.20	22600	698	400.3	3.63	1735	13.0	50	38400	22.2	45
0.25	19900	698	400.4	3.61	1727	11.5	62	33800	19.6	51
0.30	14100	699	400.4	3.58	1699	8.3	75	24000	14.1	71

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Project Number: 18492  
Test Date: October 8, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *N-C300DL*  
Blade dia.- *50"*  
Orifice dia.- *50.8"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *BLDC*  
Hp- *1100 W*  
RPM- *680*  
Volts- *220*  
Amps- *6*  
Hz- *50/60 Hz*  
Phase- *Single*  
S. F.- *-*

**Shutter:**  
Material- *none*  
# Doors- *-*  
# Columns- *-*  
Door length - *-*  
Location- *-*

**Blade:**  
Number- *3*  
Shape- *propeller*  
Material- *fiberglass*  
Pitch- *-*  
Clearance- *0.4"*

**Drive Sheaves:**  
Drive dia.- *direct*  
Axle dia.- *drive*

**Housing:**  
Material- *fiberglass*  
Intake area- *51" x 51"*  
Discharge- *50.8" dia.*  
Depth- *26"*  
0

**Guards:**  
Description- *wire*  
Spacing- *1.8" concentric*  
Location- *exhaust*

**Discharge Cone:**  
Depth- *22.5"*  
Minor dia.- *50.8"*  
Major dia.- *56"*

Notes: \*Single phase, 60 Hz, 220 VAC input to speed controller. Controller set at maximum speed setting.

Test Conditions:

T(wb) F: 64 Barometric pressure, recorded 29.41  
T(db) F: 74 Barometric Pressure, corrected 29.29 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	21700	675	220.3	3.91	848	25.6	0	36900	43.5	23
0.05	20400	675	220.3	4.25	883	23.2	12	34700	39.4	25
0.10	19000	675	221.0	4.47	911	20.9	25	32300	35.5	28
0.15	17700	675	221.5	4.63	935	18.9	37	30000	32.1	31
0.20	16100	675	221.4	4.76	954	16.8	50	27300	28.6	35
0.25	13900	675	221.0	4.75	957	14.5	62	23600	24.6	41
0.30	10800	675	221.7	4.59	938	11.5	75	18300	19.5	51

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Final Report

Project Number: 18493  
Test Date: October 8, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *N-C300DL*  
Blade dia.- *50"*  
Orifice dia.- *50.8"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *BLDC*  
Hp- *1100 W*  
RPM- *680*  
Volts- *220*  
Amps- *6*  
Hz- *50/60 Hz*  
Phase- *Single*  
S. F.- *-*

**Shutter:**  
Material- *plastic w/ aluminum frame*  
# Doors- *14 per column*  
# Columns- *2*  
Door length- *25.3"*  
Location- *intake*

**Blade:**  
Number- *3*  
Shape- *propeller*  
Material- *fiberglass*  
Pitch- *-*  
Clearance- *0.4"*

**Drive Sheaves:**  
Drive dia.- *direct*  
Axle dia.- *drive*

**Housing:**  
Material- *fiberglass*  
Intake area- *51" x 51"*  
Discharge- *50.8" dia.*  
Depth- *26"*

**Guards:**  
Description- *wire*  
Spacing- *1.8" concentric*  
Location- *exhaust*

**Discharge Cone:**  
Depth- *22.5"*  
Minor dia.- *50.8"*  
Major dia.- *56"*

Notes: \*Single phase, 60 Hz, 220 VAC input to speed controller. Controller set at maximum speed setting.

Test Conditions:

T(wb) F: 65.5 Barometric pressure, recorded 29.41  
T(db) F: 75 Barometric Pressure, corrected 29.29 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	19900	675	220.7	4.14	887	22.4	0	33800	38.1	26
0.05	18700	675	220.1	4.40	912	20.5	12	31700	34.8	29
0.10	17200	675	220.3	4.57	934	18.4	25	29300	31.3	32
0.15	15600	675	220.2	4.70	951	16.4	37	26500	27.8	36
0.20	13700	675	220.1	4.73	955	14.4	50	23300	24.4	41
0.25	11300	675	221.8	4.83	962	11.7	62	19200	19.9	50
0.30	8500	675	221.4	4.83	969	8.8	75	14500	14.9	67



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Bioenvironmental and Structural Systems Lab  
Final Report

Project Number: 18486  
Test Date: September 27, 2018

**Fan:**  
Make- *Yah Suh Dar*  
Model- *N-C300DL*  
Blade dia.- *50"*  
Orifice dia.- *50.8"*

**Motor:**  
Make- *Yah Suh Dar*  
Model- *AC*  
Hp- *1.5 (1.1 kW)*  
RPM- *710*  
Volts- *380*  
Amps- *2.6*  
Hz- *50*  
Phase- *3*  
S. F.- *-*

**Shutter:**  
Material- *plastic w/ aluminum frame*  
# Doors- *14 per column*  
# Columns- *2*  
Door length *25.3"*  
Location- *intake*

**Blade:**  
Number- *3*  
Shape- *propeller*  
Material- *fiberglass*  
Pitch- *-*  
Clearance- *0.4"*

**Drive Sheaves:**  
Drive dia.- *direct*  
Axle dia.- *drive*

**Housing:**  
Material- *fiberglass*  
Intake area- *51" x 51"*  
Discharge- *50.8" dia.*  
Depth- *26"*

**Guards:**  
Description- *wire*  
Spacing- *1.8" concentric*  
Location- *exhaust*

**Discharge Cone:**  
Depth- *22.5"*  
Minor dia.- *50.8"*  
Major dia.- *56"*

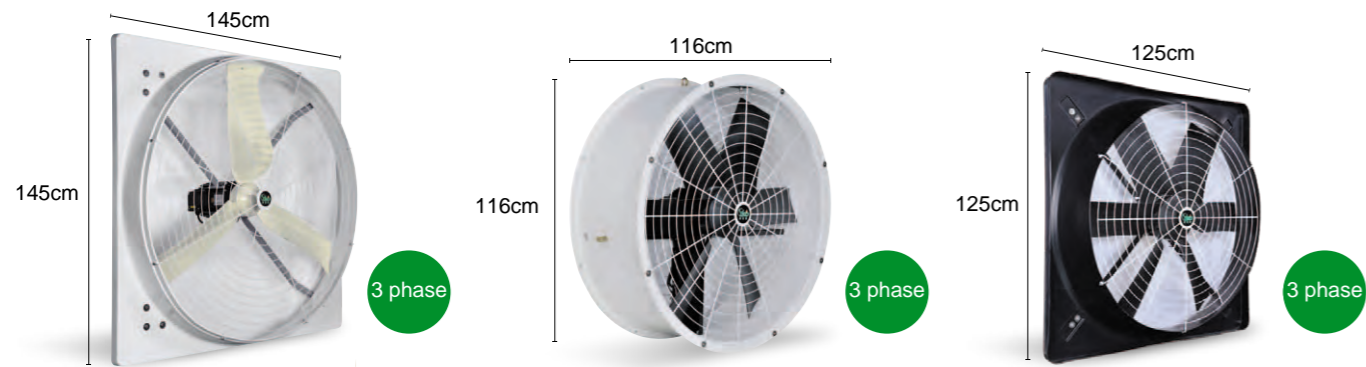
Notes: \*50 Hz test

Test Conditions:

T(wb) F: 63 Barometric pressure, recorded 29.41  
T(db) F: 79 Barometric Pressure, corrected 29.28 (In. Hg)

							SI Units			
Static Pressure (in.H2O)	Airflow (cfm)	rpm	Volts	Amps	Watts	cfm/Watt	Static Pressure (Pa)	Airflow (m <sup>3</sup> /hr.)	(m <sup>3</sup> /hr)/W	W/1000m <sup>3</sup> /hr
0.00	20900	710	381.0	2.56	1116	18.7	0	35500	31.9	31
0.05	19900	709	381.1	2.59	1134	17.5	12	33800	29.8	34
0.10	18500	708	381.0	2.62	1152	16.1	25	31400	27.3	37
0.15	17100	707	381.0	2.63	1169	14.6	37	29000	24.8	40
0.20	15300	706	381.0	2.65	1186	12.9	50	26000	21.9	46
0.25	13400	705	381.0	2.65	1192	11.3	62	22800	19.1	52
0.30	10100	704	381.0	2.67	1206	8.4	75	17200	14.2	70

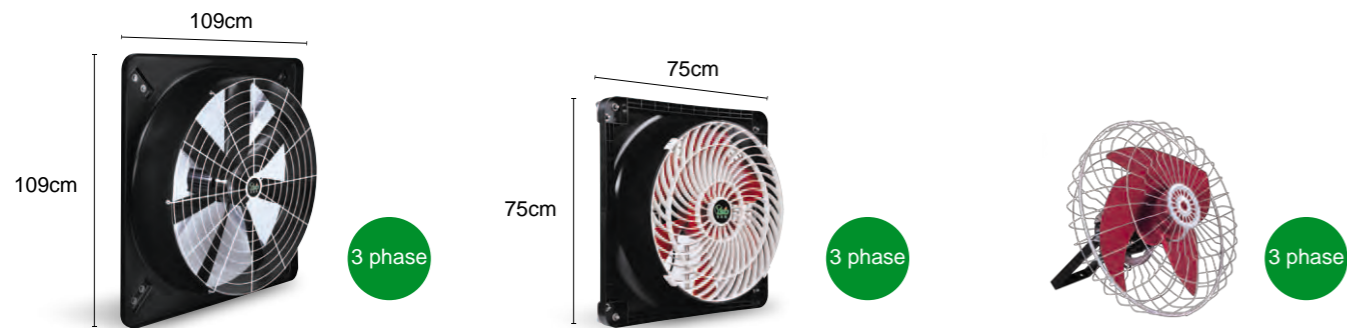




<b>Model</b>	54" C301D Circulation Fan
<b>External Frame</b>	FRP Fiberglass Frame
<b>Fan Blades</b>	50" 3 SMC Fiberglass Blades
<b>Motor</b>	1.5HP Grade F / 2HP Grade F
<b>Number of Poles</b>	12 Poles / 10 Poles
<b>Rotating Speed</b>	550 RPM / 590 RPM
<b>Sound Volume</b>	70 dB / 75 dB (Detected from 3m near.)
<b>Voltage</b>	3 $\phi$ 220V, 60Hz (Optional)
<b>Size</b>	L145xW41xH145 cm
<b>Weight</b>	54 kg

<b>Model</b>	42" M601-FRP Circulation Fan
<b>External Frame</b>	FRP Fiberglass Frame
<b>Fan Blades</b>	42" 6 Nylon 6+ Fiber Blades
<b>Motor</b>	1HP Grade F
<b>Number of Poles</b>	12 Poles
<b>Rotating Speed</b>	520 RPM
<b>Sound Volume</b>	60 dB (Detected from 3m near.)
<b>Voltage</b>	3 $\phi$ 220V, 60Hz (Optional)
<b>Size</b>	$\phi$ 116xW41 cm
<b>Weight</b>	47 kg

<b>Model</b>	42" D601D Circulation Fan
<b>External Frame</b>	PE Frame
<b>Fan Blades</b>	42" 6 Nylon 6+ Fiber Blades
<b>Motor</b>	1HP Grade F
<b>Number of Poles</b>	12 Poles
<b>Rotating Speed</b>	520 RPM
<b>Sound Volume</b>	60 dB (Detected from 3m near.)
<b>Voltage</b>	3 $\phi$ 220V, 60Hz (Optional)
<b>Size</b>	L125xW40xH125 cm
<b>Weight</b>	45 kg



<b>Model</b>	36" L701D Circulation Fan
<b>External Frame</b>	PE Frame
<b>Fan Blades</b>	36" 7 Nylon 6+ Fiber Blades
<b>Motor</b>	3/4HP Grade F
<b>Number of Poles</b>	10 Poles
<b>Rotating Speed</b>	660 RPM
<b>Sound Volume</b>	60 dB (Detected from 3m near.)
<b>Voltage</b>	3 $\phi$ 220V, 60Hz (Optional)
<b>Size</b>	L109xW30xH109 cm
<b>Weight</b>	30 kg

<b>Model</b>	24" D24-FAN Circulation Fan
<b>External Frame</b>	PP Frame
<b>Fan Blades</b>	24" 6 Nylon 6+ Fiber Blades
<b>Motor</b>	1/3HP Grade F / 1/4HP Grade F
<b>Number of Poles</b>	6 Poles / 8 Poles
<b>Rotating Speed</b>	1140 RPM / 870 RPM
<b>Sound Volume</b>	65 dB / 60 dB (Detected from 3m near.)
<b>Voltage</b>	3 $\phi$ 220V, 60Hz (Optional)
<b>Size</b>	L75xW30.5xH75 cm
<b>Weight</b>	21.5 kg

<b>Model</b>	18" D18-FAN
<b>External Frame</b>	Iron Casing
<b>Fan Blades</b>	18" 3 Nylon 6+ Fiber Blades
<b>Motor</b>	1/6 HP Grade F
<b>Number of Poles</b>	6 Poles
<b>Rotating Speed</b>	1120 RPM
<b>Sound Volume</b>	55 dB (Detected from 3m near.)
<b>Voltage</b>	3 $\phi$ 220V, 60Hz (Optional)
<b>Size</b>	$\phi$ 57xW31 cm
<b>Weight</b>	7.5 kg

### Impact Proof Feeding Tray



Feeding Tray for Broiler      Feeding Tray for Gallus

<b>Model</b>	Feeding Tray for Broiler	Feeding Tray for Gallus
<b>Size</b>	$\phi$ 33 cm	$\phi$ 33 cm
<b>Depth</b>	7 cm	5.8 cm
<b>Material</b>	Impact Resistant PP	Impact Resistant PP



Model : Original 7090      Model : Black 7090

### Main Function and Advantage

- Opened style high temperature.
- Temperature decreased by cooling board with water filter.
- The temperature decreased approximately 4~6°C when air in and air out, the temperature decrease effect is more obvious if temperature is higher.

### Evaporative Cooling Pad

<b>L</b>	600mm	Length
<b>H</b>	1800mm	Height
<b>T</b>	150mm	Thickness
<b><math>\alpha</math></b>	45, 15, 30	Angle with respect to the airflow direction
<b><math>\beta</math></b>	45, 60	Angle with respect to the airflow direction
<b>Hp</b>	7	Flute size (wave height)