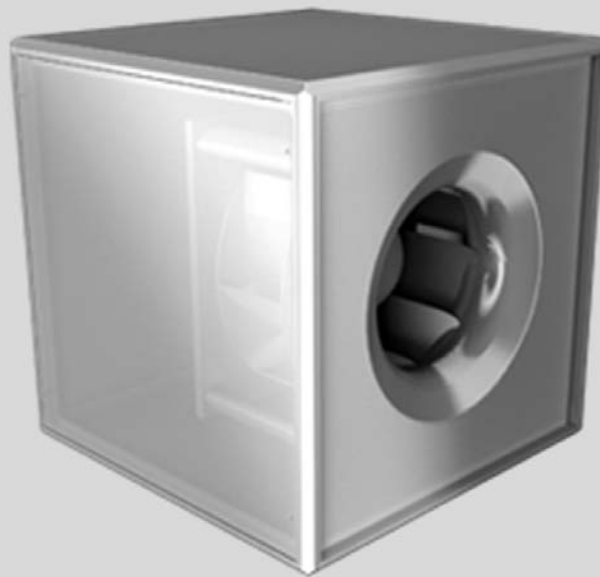


Unobox units with backward curved centrifugal impellers



**Type Code**

UNO 67 -450 -4 E W

Unobox

Box size

50=500mm ; 67=670mm

80=800mm ; 102=1020mm

Impeller diameter

Number of poles

D - Three Phase A.C.

E - Single Phase A.C.

W - Aluminum material

### Features and Construction

The Rosenberg Unoboxes are designed to handle air volumes from 800 m<sup>3</sup>/h to 13000 m<sup>3</sup>/h. Typical applications are in apartments, shops, supermarkets, warehouses, toilets, offices, garages etc. and others areas of slight air contamination.

### Casing

The housing supporting frames are double chamber aluminium profiles with die-casted aluminum corners and double skinned (20mm) galvanized steel panels insulated with non-inflammable, noise and temperature insulating fiberglass mats. The two chamber system delays the temperature exchange from the outside to inside so that condensation is almost non-existent.

### Impeller

Fans up to diameter 400mm have backward curved centrifugal impellers, made of plastic with galvanized steel support plates. Fans with a diameter 450mm and larger have high efficiency backward curved centrifugal impellers made of aluminum. The impellers together with the external rotor motors are balanced dynamically at two levels according to quality level G2.5 to DIN ISO 1940.

### Motors

Rosenberg external rotor motors have IP54 rating protection. The winding insulation corresponds to insulation class F. The ball bearings are encapsulated together with a special long life lubricant to guarantee a maintenance free and low noise operation.

All motors windings are manufactured with thermal contact switches, indented to protect the motor from overloading. The terminal box is affixed to the motor housing.

### Direction of Rotation

The standard rotation direction of the impellers, as seen from the inlet side is clockwise. Anti-clockwise operation will cause overload damage to the motor. Therefore, it is essential to check the direction of rotation before initial operation.

### Installation of Unobox

The panels are removable so that the discharge is possible in different directions.

### Air performance curves

Performance curves and technical specifications are based upon tests carried out in accordance to AMCA standard 210 by an independence laboratory.

The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Rating Program. Performance certified is for installation type A - free inlet, free outlet. Performance rating do not include the effects of appurtenances (accessories).

The curves are valid for air with a density of 1.2kg/m<sup>3</sup> at a temperature of 20°C. The curves in this catalogue shows the increase of the static and the dynamic pressure in Pascal (Pa) as a function of the airflow in cubic meter per hour (m<sup>3</sup>/h).

Comparatively standards are DIN 24163.

### Sound Level

The sound ratings shown are based on tests and procedures performed in accordance with AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

The values shown are for inlet Lwi A sound power levels for installation type A: free inlet, free outlet.



Rosenberg East Asia Pte Ltd certifies that the Unobox fans, UNO series, model UNO 50-355-4E, UNO 67-400-4E, UNO 67-450-4EW, UNO 67-500-4D, UNO 80-560-4D and UNO 80-630-4D, shown herein are licensed to bear the AMCA seal. The ratings shown are based on tests and procedures performed in accordance with AMCA publication 211 and AMCA publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



- + installation in any position possible
- + high efficiency as a result of optimized backward curved impellers made from plastic
- + speed is 100% infinitely variable
- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + performance certified is for installation type A free inlet , free outlet
- + performance ratings do not include the effects of appurtenances ( accessories)

**Technical Data:**

Type: <b>UNO-50-355-4E</b>		Art. No. F08-35503	
U	230V (50Hz)	$\Delta p_{fa}$ min	- Pa
P1	0.28 Kw	$\Delta I$	11 %
IN	1.25A	IA / 1N	2
n (min-1)	1320	Class/ IP	F/ IP54
C (uF 400V)	6 uF	W. diag	01.024
tR	55 °C	Weight	32 kg

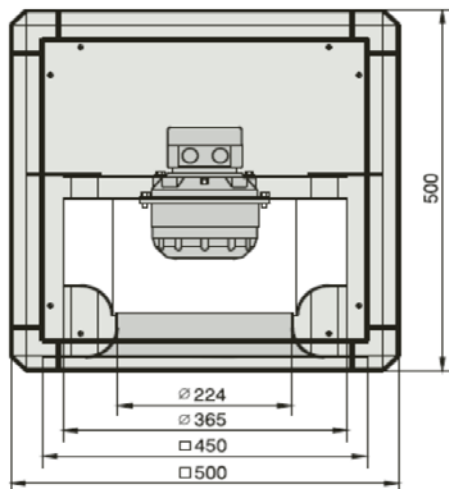
**Sound levels:**

LwA-weighted	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
@0Pa 2668cmh	44	72	66	66	65	68	62	48
@102Pa 2156cmh	43	62	63	64	61	61	57	43
@224Pa 1433cmh	42	60	59	59	57	57	52	42
@303Pa 720cmh	49	63	64	62	58	58	52	48

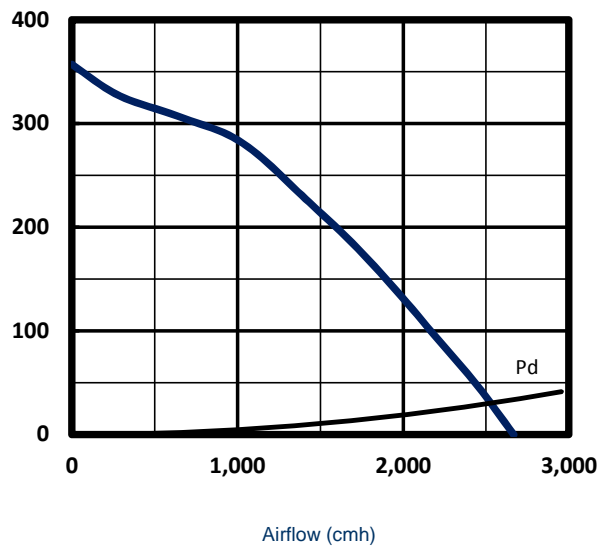
Values shown are for inlet Lwi A sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

**Dimensions:**

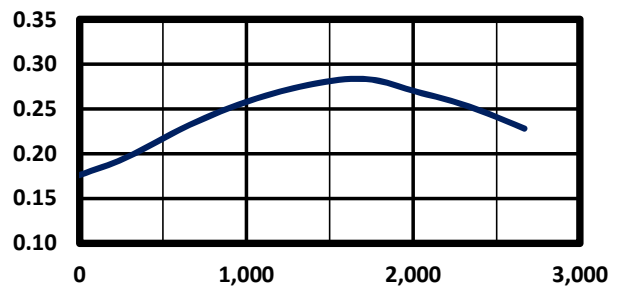
(all dimensions in mm)



Static Pressure (Pa)

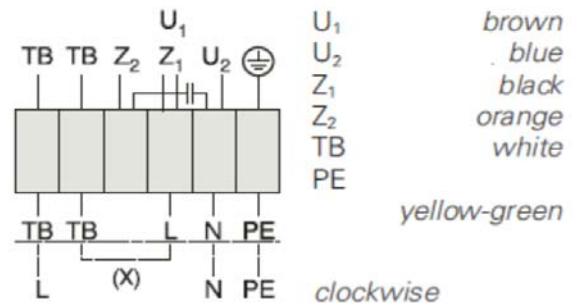


Motor Input Watt (kW)



**Wiring diagram:**

01.024





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- + discharge in any direction possible
- + extremely low noise
- + performance certified is for installation type A free inlet , free outlet
- + performance ratings do not include the effects of appurtenances ( accessories)

**Technical Data:**

Type: <b>UNO-67-400-4E</b>		Art. No. F08-40007	
U	230V (50Hz)	Δpfa min	- Pa
P1	0.54 Kw	Δ I	18 %
IN	2.55A	IA / 1N	2.65
n (min-1)	1405	Class/ IP	F/ IP54
C (uF 400V)	12 uF	W. diag	01.024
tR	45 °C	Weight	49 kg

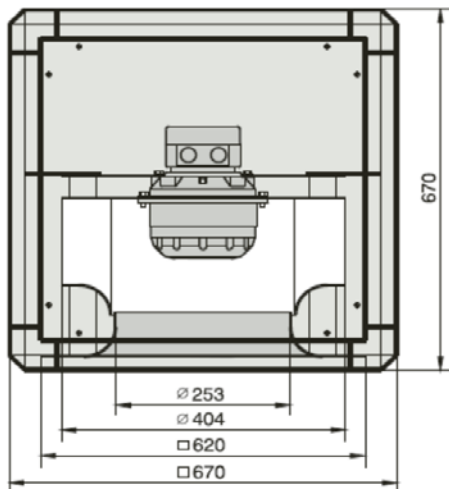
**Sound levels:**

LwA-weighted	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
@0Pa 3902cmh	46	65	69	73	72	78	67	55
@230Pa 2876cmh	45	66	67	69	67	64	58	49
@359Pa 2149cmh	45	62	65	65	62	59	57	49
@404Pa 1411cmh	48	63	67	65	63	60	56	49

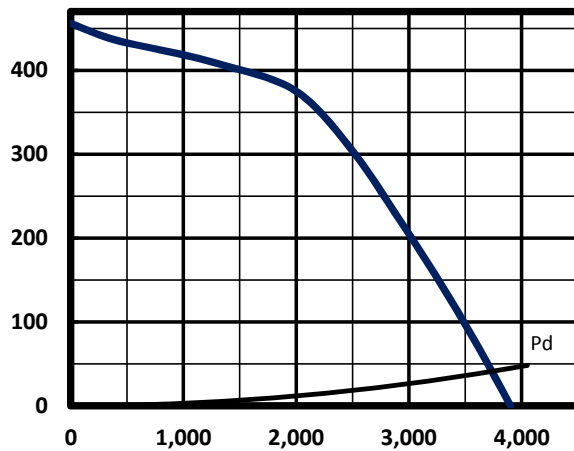
Values shown are for inlet Lwi A sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

**Dimensions:**

(all dimensions in mm)

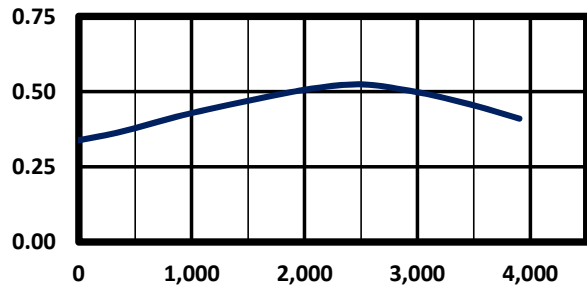


Static Pressure (Pa)



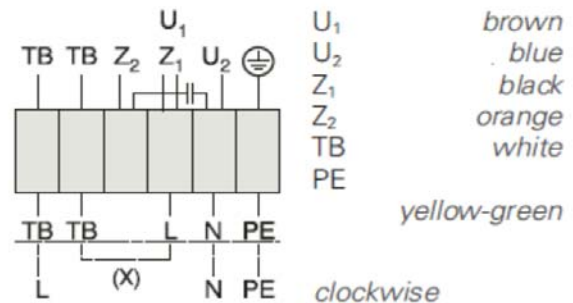
Airflow (cmh)

Motor Input Watt (kW)



**Wiring diagram:**

01.024





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- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + performance certified is for installation type A free inlet , free outlet
- + performance ratings do not include the effects of appurtenances ( accessories)

**Technical Data:**

Type: <b>UNO-67-450-4EW</b>		Art. No. F08-45052	
U	230V (50Hz)	Δpfa min	- Pa
P1	0.84 Kw	Δ I	9 %
IN	3.7A	IA / 1N	2.1
n (min-1)	1260	Class/ IP	F/ IP54
C (uF 400V)	16 uF	W. diag	01.024
tR	40 °C	Weight	62 kg

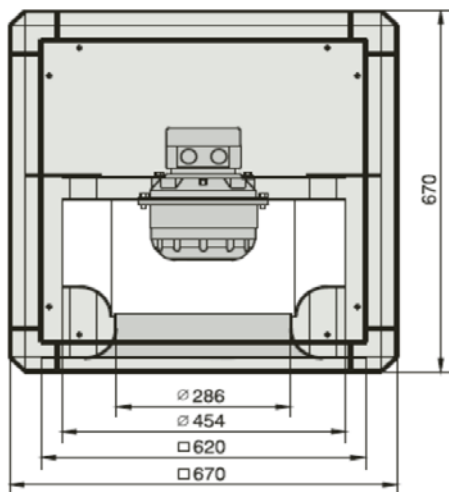
**Sound levels:**

LwA-weighted	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
@0Pa 5850cmh	47	68	71	74	70	73	69	64
@142Pa 4867cmh	45	67	68	71	67	70	64	59
@276Pa 3740cmh	44	68	64	66	63	67	60	53
@419Pa 2160cmh	49	69	66	67	64	63	57	54

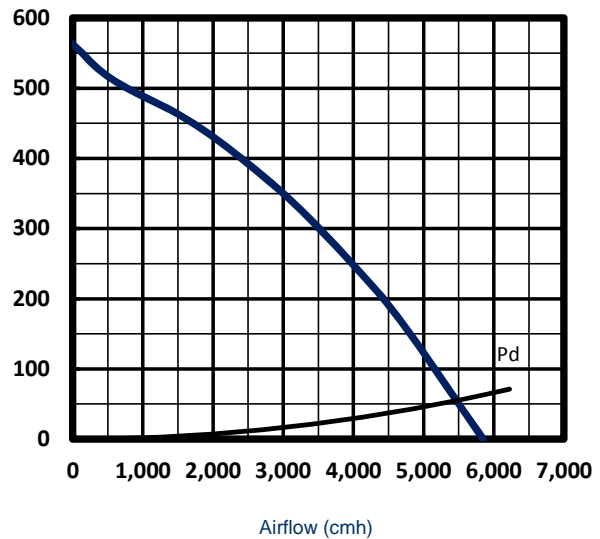
Values shown are for inlet Lwi A sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

**Dimensions:**

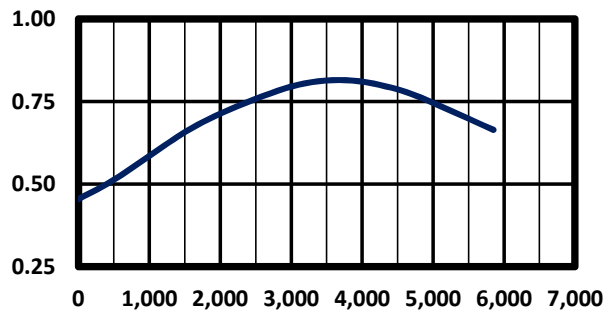
(all dimensions in mm)



Static Pressure (Pa)

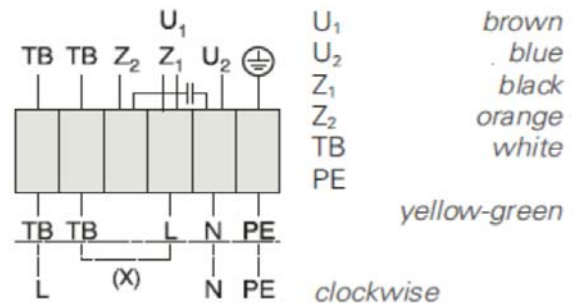


Motor Input Watt (kW)



**Wiring diagram:**

01.024





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- + speed is 100% infinitely variable
- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + air performance tested to DIN 24163
- + sound tested in accordance to DIN 45635 part 38

**Technical Data:**

Type: UNO-67-500-4E		Art. No. F08-50015	
U	230V (50Hz)	$\Delta p_{fa \text{ min}}$	- Pa
P1	1.42 Kw	$\Delta I$	8 %
IN	6.3A	IA / 1N	2.3
n (min-1)	1360	Class/ IP	F/ IP54
C( uF 400V)	30 uF	W. diag	01.024
tR	40 °C	Weight	66 kg

**Sound levels:**

LwA-weighted	Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	58	-	54	45	47	47	43	44	54
dBA inlet side	80	-	61	73	74	74	72	69	60
dBA Outlet side	80	-	60	69	72	77	71	67	58

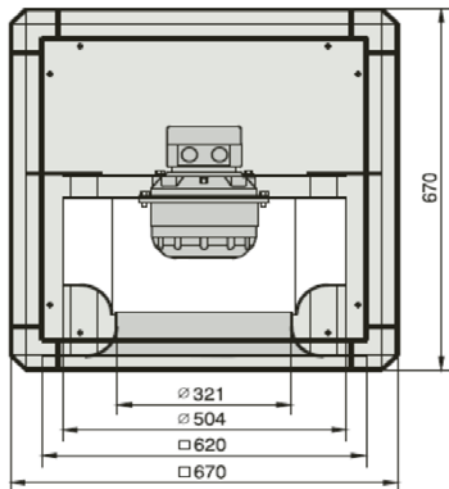
Model UNO 67-500-4E is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

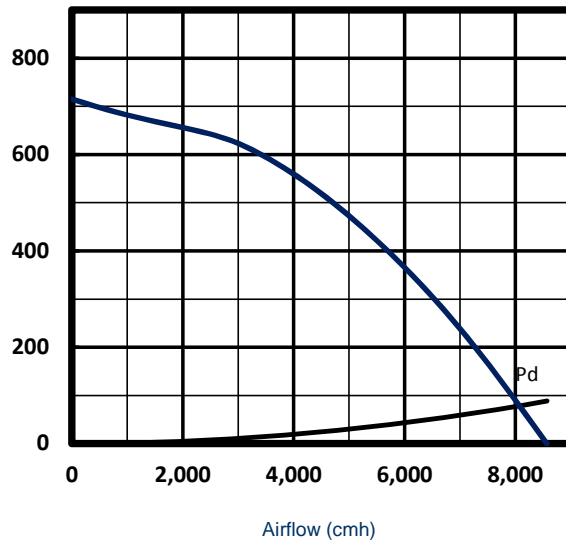
Speeds (RPM) shown is nominal.

**Dimensions:**

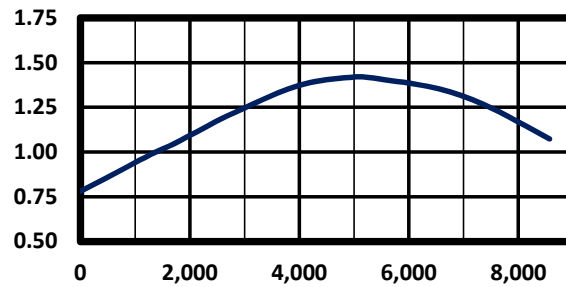
(all dimensions in mm)



Static Pressure (Pa)

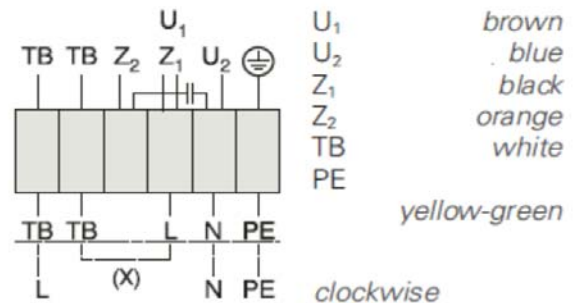


Motor Input Watt (kW)



**Wiring diagram:**

01.024





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- + high efficiency as a result of optimized backward curved impellers made from plastic
- + speed is 100% infinitely variable
- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + air performance tested to DIN 24163
- + sound tested in accordance to DIN 45635 part 38

**Technical Data:**

Type: <b>UNO-50-355-4D</b>		Art. No. F08-35504	
U	400V (50Hz)	$\Delta p_{fa}$ min	- Pa
P1	0.27 Kw	$\Delta I$	- %
IN	0.55A	IA / 1N	2.7
n (min-1)	1310	Class/ IP	F/ IP54
C( uF 400V)	- uF	W. diag	01.006
tR	40 °C	Weight	33 kg

**Sound levels:**

LwA-weighted	Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	47	-	43	34	36	36	32	33	43
dBA inlet side	69	-	56	60	65	63	60	56	45
dBA Outlet side	69	-	57	58	64	64	61	57	44

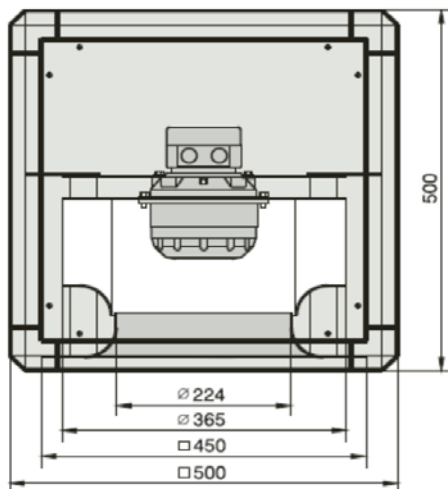
Model UNO 50-355-4D is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

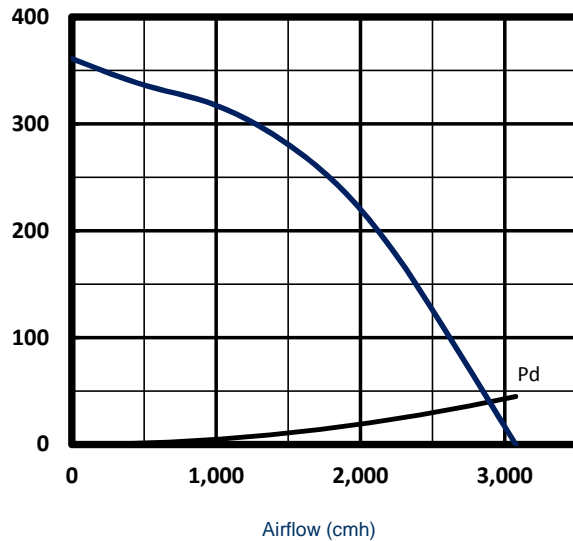
Speeds (RPM) shown is nominal.

**Dimensions:**

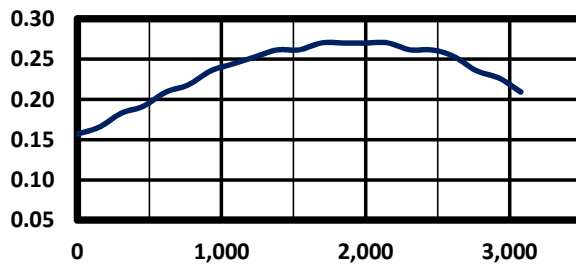
(all dimensions in mm)



Static Pressure (Pa)

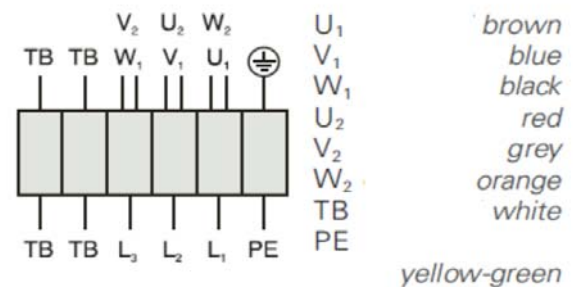


Motor Input Watt (kW)



**Wiring diagram:**

01.006





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- + speed is 100% infinitely variable
- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + air performance tested to DIN 24163
- + sound tested in accordance to DIN 45635 part 38

**Technical Data:**

Type: UNO-67-400-4D		Art. No. F08-40004	
U	400V (50Hz)	$\Delta p_{fa}$ min	- Pa
P1	0.46 Kw	$\Delta I$	- %
IN	0.84A	IA / 1N	3.2
n (min-1)	1350	Class/ IP	F/ IP54
C( uF 400V)	- uF	W. diag	0.1006
tR	50 °C	Weight	49 kg

**Sound levels:**

LwA-weighted	Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	54	-	50	41	43	43	39	40	50
dBA inlet side	76	-	61	70	72	68	66	63	56
dBA Outlet side	76	-	66	67	69	72	67	62	53

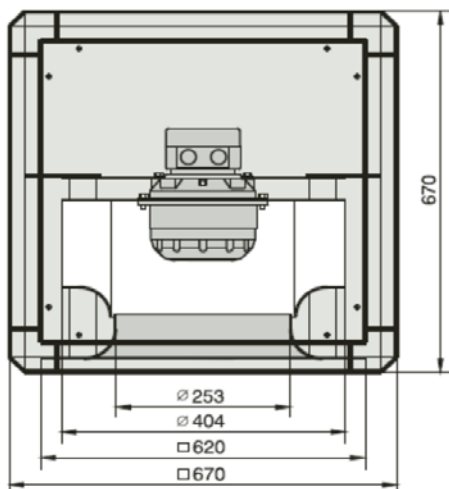
Model UNO 67-400-4D is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

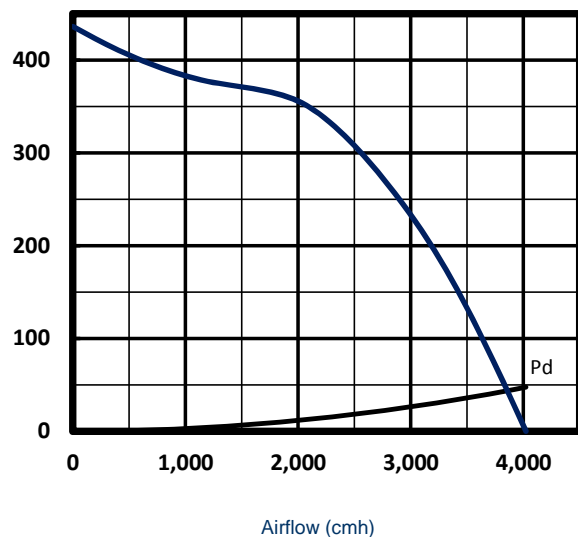
Speeds (RPM) shown is nominal.

**Dimensions:**

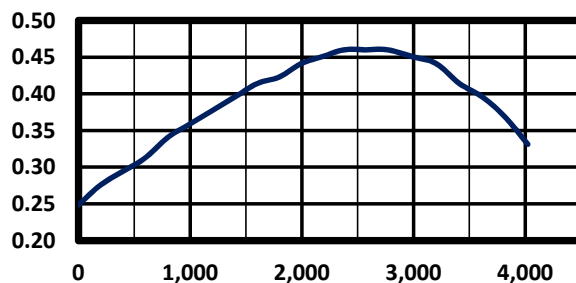
(all dimensions in mm)



Static Pressure (Pa)

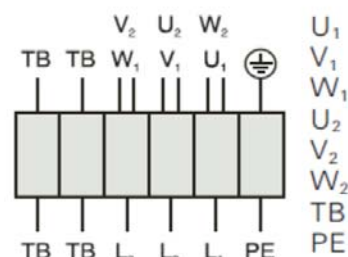


Motor Input Watt (kW)



**Wiring diagram:**

01.006



- brown
- blue
- black
- red
- grey
- orange
- white
- yellow-green





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- + speed is 100% infinitely variable
- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + air performance tested to DIN 24163
- + sound tested in accordance to DIN 45635 part 38

**Technical Data:**

Type: <b>UNO-67-450-4DW</b>		Art. No. F08-45007	
U	400V (50Hz)	$\Delta p_{fa}$ min	- Pa
P1	0.94 Kw	$\Delta I$	- %
IN	1.7A	IA / 1N	3.3
n (min-1)	1320	Class/ IP	F/ IP54
C( uF 400V)	- uF	W. diag	01.006
tR	40 °C	Weight	54 kg

**Sound levels:**

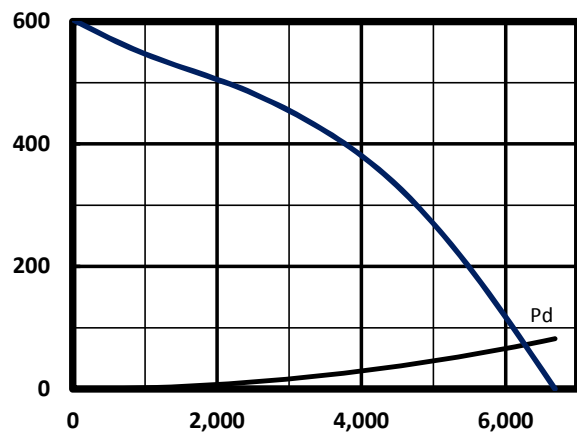
LwA-weighted	Frequency (Hz)								
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	53	-	49	40	42	42	38	39	49
dBA inlet side	75	-	60	69	71	67	65	62	55
dBA Outlet side	75	-	65	66	68	71	66	61	52

Model UNO 67-450-4DW is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

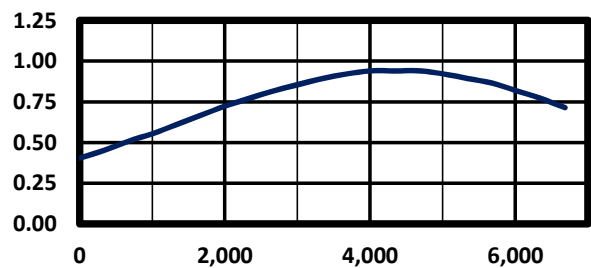
Speeds (RPM) shown is nominal.

Static Pressure (Pa)



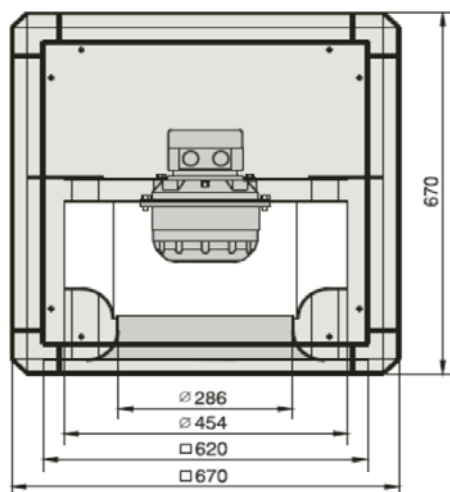
Airflow (cmh)

Motor Input Watt (kW)



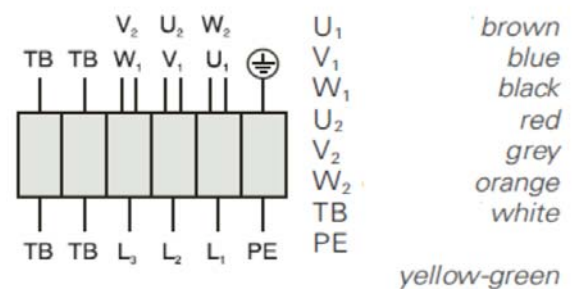
**Dimensions:**

(all dimensions in mm)



**Wiring diagram:**

01.006





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- + discharge in any direction possible
- + extremely low noise
- + performance certified is for installation type A free inlet , free outlet
- + performance ratings do not include the effects of appurtenances ( accessories)

**Technical Data:**

Type: <b>UNO-67-500-4D</b>		Art. No. F08-50011	
U	400V (50Hz)	$\Delta p_{fa}$ min	- Pa
P1	1.35 Kw	$\Delta I$	- %
IN	2.6A	IA / 1N	3.9
n (min-1)	1340	Class/ IP	F/ IP54
C (uF 400V)	- uF	W. diag	01.006
tR	40 °C	Weight	66 kg

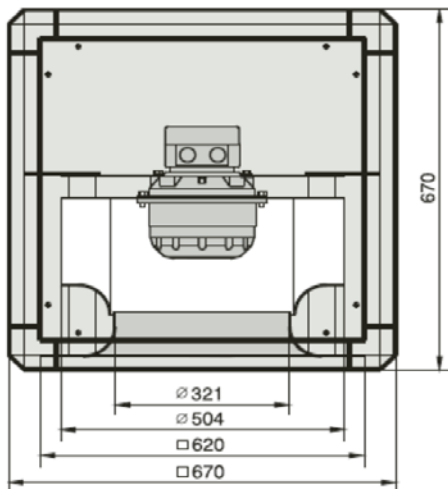
**Sound levels:**

LwA-weighted	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
@0Pa 7798cmh	52	75	78	78	75	75	76	68
@212Pa 6653cmh	51	77	78	77	74	72	69	62
@440Pa 5112cmh	48	75	77	75	72	68	64	59
@611Pa 2858cmh	56	71	79	77	73	70	66	60

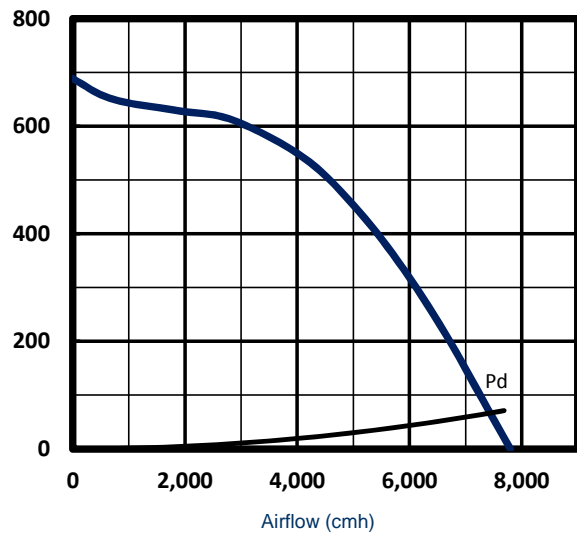
Values shown are for inlet Lwi A sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

**Dimensions:**

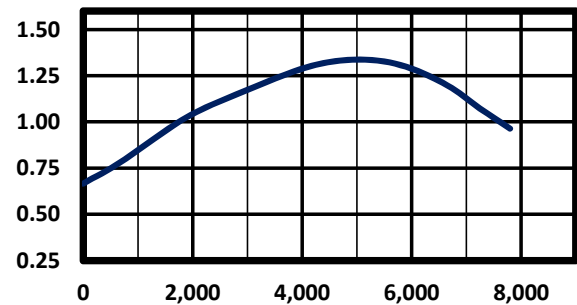
(all dimensions in mm)



Static Pressure (Pa)

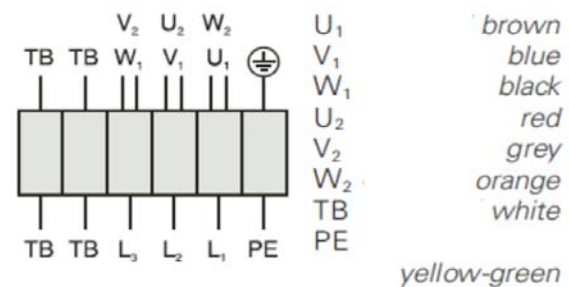


Motor Input Watt (kW)



**Wiring diagram:**

01.006





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- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + performance certified is for installation type A free inlet , free outlet
- + performance ratings do not include the effects of appurtenances ( accessories)

**Technical Data:**

Type: <b>UNO-80-560-4D</b>		Art. No. F08-56010	
U	400V (50Hz)	$\Delta p_{fa}$ min	- Pa
P1	2.16 Kw	$\Delta I$	2 %
IN	4.1A	IA / 1N	3.1
n (min-1)	1355	Class/ IP	F/ IP54
C (uF 400V)	- uF	W. diag	01.006
tR	40 °C	Weight	95 kg

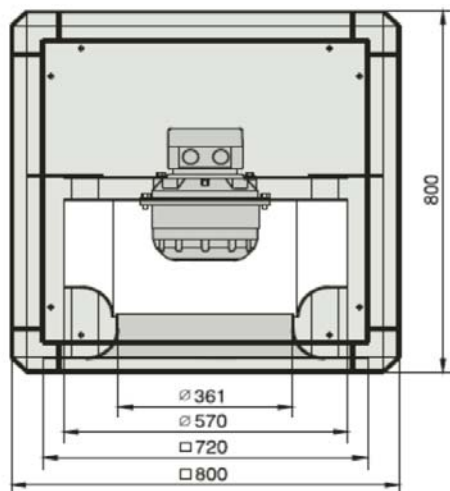
**Sound levels:**

LwA-weighted	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
@0Pa 10656cmh	56	73	81	81	79	79	79	70
@234Pa 9000cmh	56	72	78	79	77	75	71	66
@472Pa 7164cmh	54	70	76	76	74	71	69	63
@724Pa 4176cmh	57	71	74	73	73	72	71	65

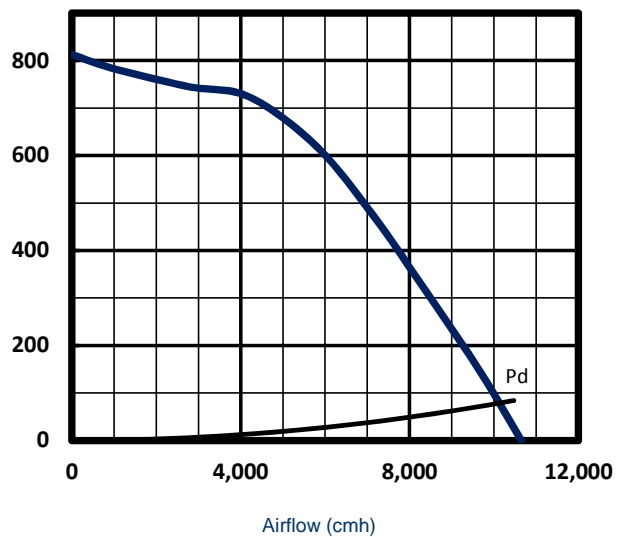
Values shown are for inlet Lwi A sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

**Dimensions:**

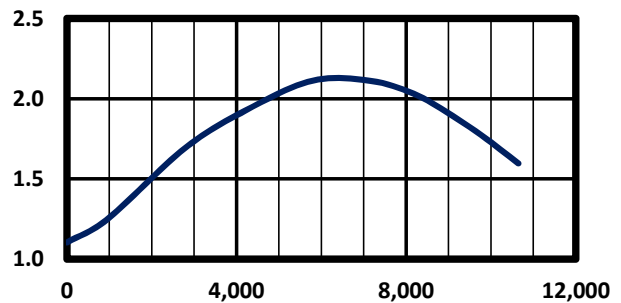
(all dimensions in mm)



Static Pressure (Pa)

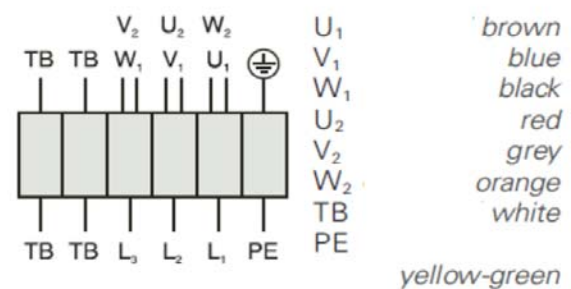


Motor Input Watt (kW)



**Wiring diagram:**

01.006





- + installation in any position possible
- + high efficiency as a result of optimized backward curved impellers made from aluminium.
- + speed is 100% infinitely variable
- + no condensate formation by using 2 chambers aluminium profile
- + discharge in any direction possible
- + extremely low noise
- + performance certified is for installation type A free inlet , free outlet
- + performance ratings do not include the effects of appurtenances ( accessories)

**Technical Data:**

Type: <b>UNO-80-630-4D</b>		Art. No. F08-63008	
U	400V (50Hz)	Δpfa min	- Pa
P1	4.0 Kw	Δ I	20 %
IN	6.8A	IA / 1N	4.2
n (min-1)	1400	Class/ IP	F/ IP54
C( uF 400V)	- uF	W. diag	01.006
tR	45 °C	Weight	105 kg

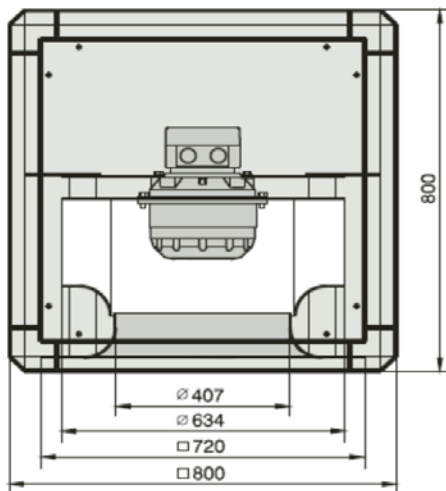
**Sound levels:**

LwA-weighted	Frequency (Hz)							
	63	125	250	500	1K	2K	4K	8K
@0Pa 12960cmh	63	79	86	87	85	82	80	77
@326Pa 10944cmh	63	79	83	85	83	79	77	74
@685Pa 8424cmh	62	77	81	82	81	78	75	70
@982Pa 4716cmh	64	79	84	83	83	80	77	71

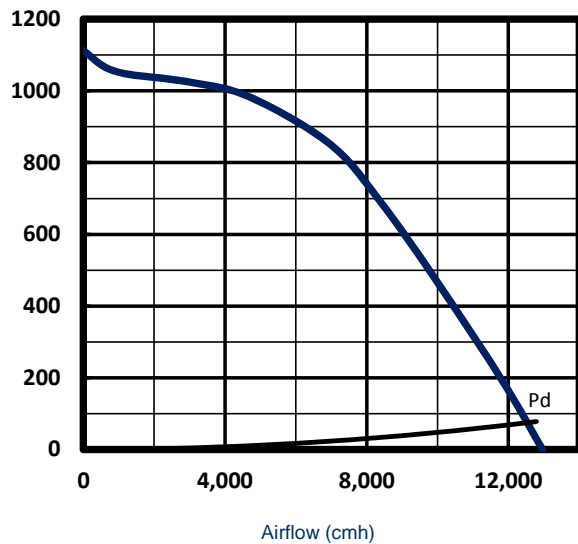
Values shown are for inlet Lwi A sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

**Dimensions:**

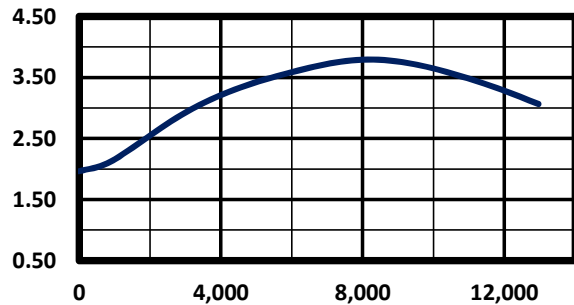
(all dimensions in mm)



Static Pressure (Pa)



Motor Input Watt (kW)



**Wiring diagram:**

01.006

