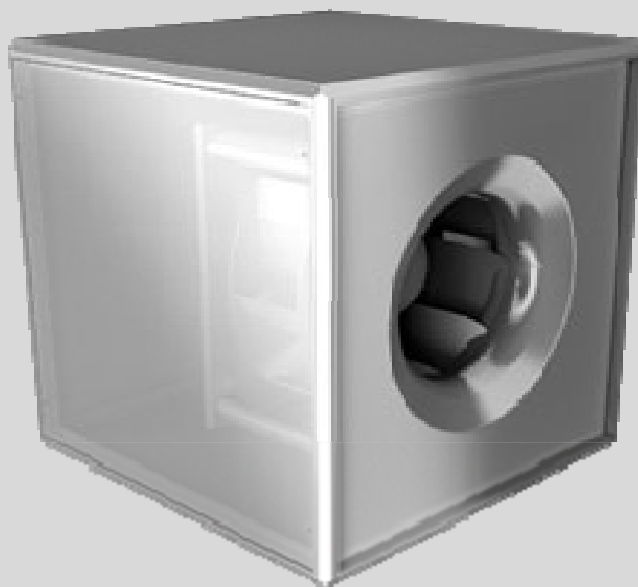


## Unobox units with backward curved centrifugal impellers



### 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)	$\Delta p_{fa \text{ min}}$	- 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:

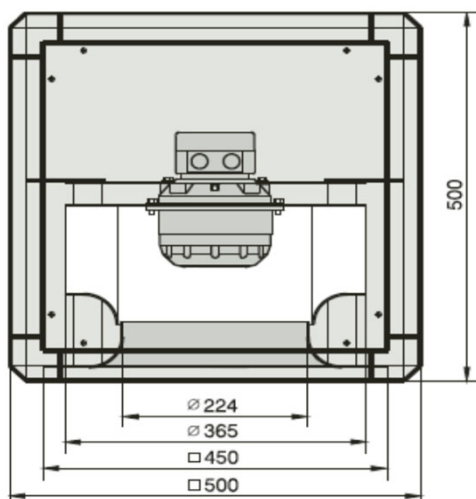
	Frequency (Hz)								Total LwIA
	63	125	250	500	1K	2K	4K	8K	
@0Pa 2880cmh	67	75	73	68	64	65	60	56	72
@102Pa 2257cmh	64	71	70	66	61	60	54	48	68
@224Pa 1516cmh	63	70	64	62	60	59	55	44	66
@303Pa 842cmh	71	74	69	63	58	59	59	47	67

Values shown are for inlet Lwi and LwiA 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. The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts, calculated per AMCA International Standard 301. Performance is based on actual speed of test.

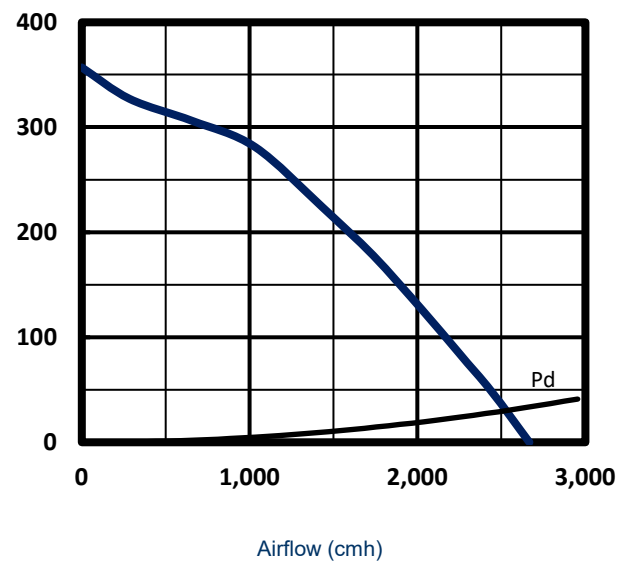
Speeds (RPM) shown is nominal.

## Dimensions:

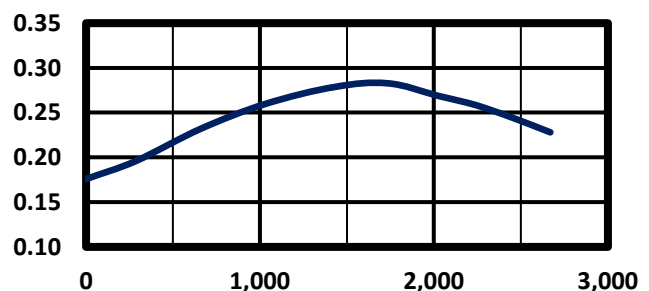
(all dimensions in mm)



Static Pressure (Pa)

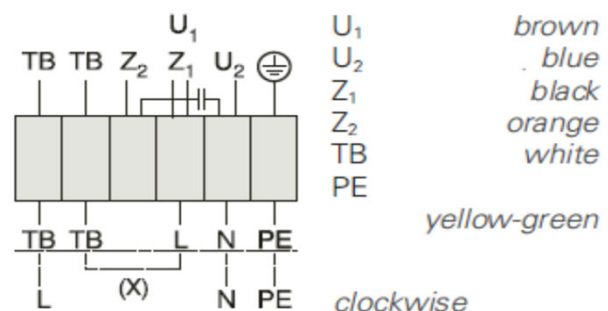


Motor Input Watt (kW)



## Wiring diagram:

01.024





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- + 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-67-400-4E</b>		Art. No. F08-40007	
U	230V (50Hz)	$\Delta p_{fa \text{ min}}$	- Pa
P1	0.54 Kw	$\Delta I$	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

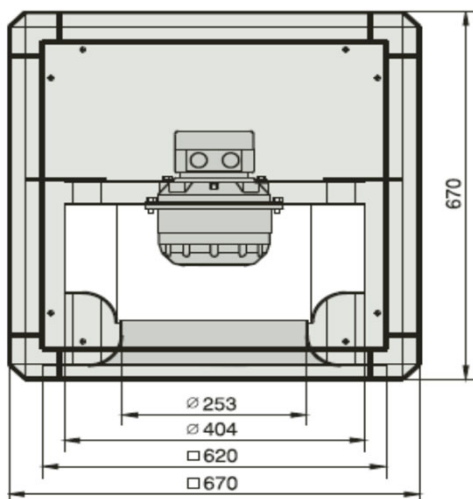
## Sound levels:

	Frequency (Hz)								Total LwIA
	63	125	250	500	1K	2K	4K	8K	
@0Pa 3902cmh	71	80	77	76	72	77	66	56	81
@230Pa 2876cmh	70	81	75	72	67	63	57	50	74
@359Pa 2149cmh	70	77	73	68	62	58	56	50	70
@404Pa 1411cmh	73	78	75	68	63	59	55	50	71

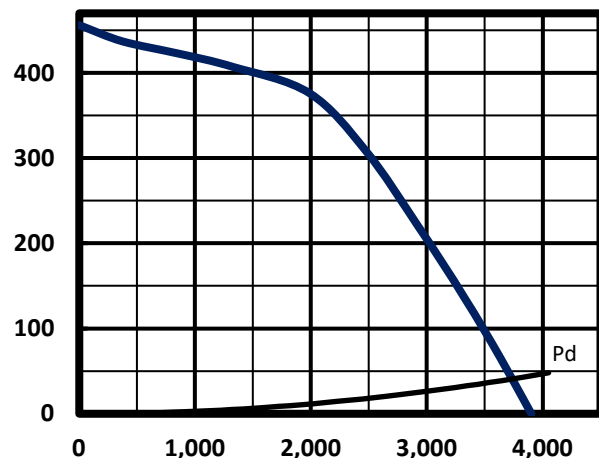
Values shown are for inlet Lwi and LwiA sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts, calculated per AMCA International Standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

## Dimensions:

(all dimensions in mm)

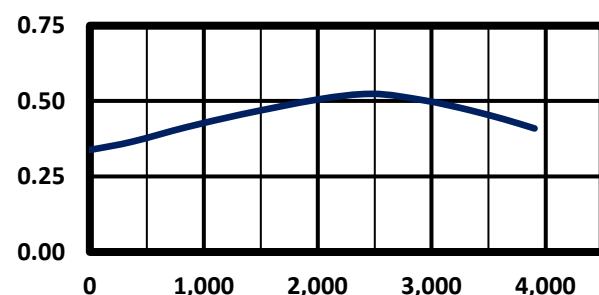


Static Pressure (Pa)



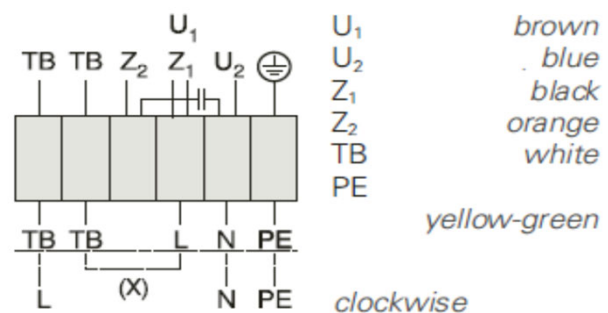
Airflow (cmh)

Motor Input Watt (kW)



## Wiring diagram:

01.024





- + 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-67-450-4EW</b>		Art. No. F08-45052	
U	230V (50Hz)	$\Delta p_{fa \text{ min}}$	- Pa
P1	0.84 Kw	$\Delta I$	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

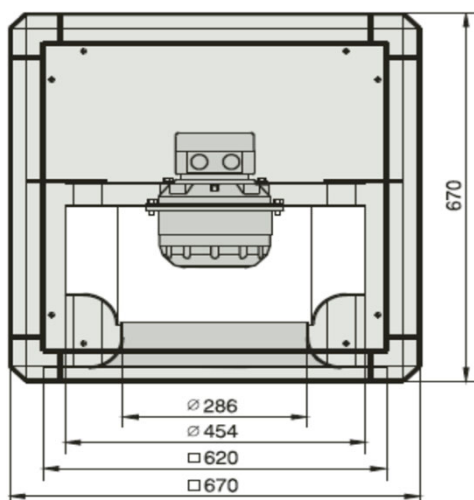
## Sound levels:

	Frequency (Hz)								Total LwIA
	63	125	250	500	1K	2K	4K	8K	
@0Pa 5850cmh	72	83	79	77	70	72	68	65	79
@142Pa 4867cmh	70	82	76	74	67	69	63	60	76
@276Pa 3740cmh	69	83	72	69	63	66	59	54	73
@419Pa 2160cmh	74	84	74	70	64	62	56	55	73

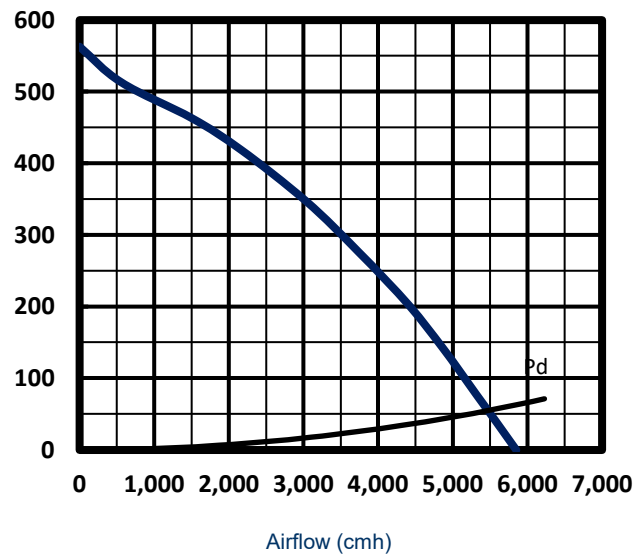
Values shown are for inlet Lwi and LwiA sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts, calculated per AMCA International Standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

## Dimensions:

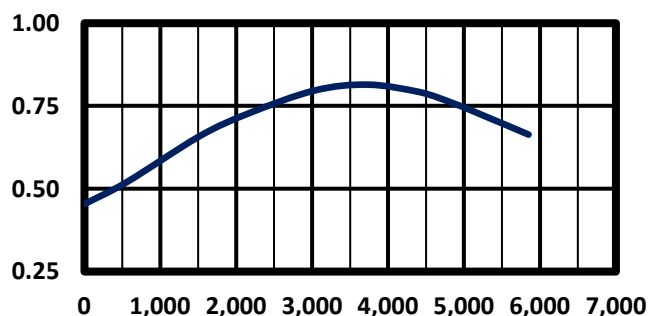
(all dimensions in mm)



Static Pressure (Pa)

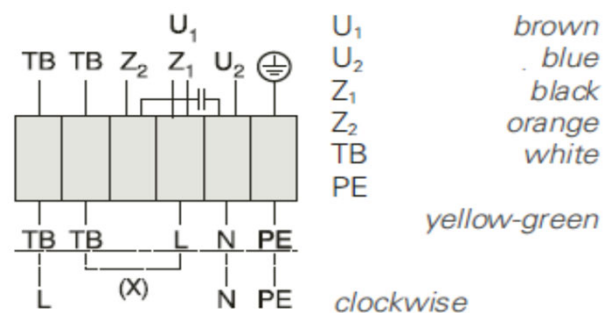


Motor Input Watt (kW)



## Wiring diagram:

01.024





- + 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
- + air performance tested to DIN 24163
- + sound tested in accordance to DIN 45635 part 38

## Technical Data:

Type: <b>UNO-67-500-4E</b>		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:

	Frequency (Hz)								Total dBA
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	-	70	54	50	47	42	43	55	58
dBA inlet side	-	77	82	77	74	71	68	61	80
dBA Outlet side	-	76	78	75	77	70	66	59	80

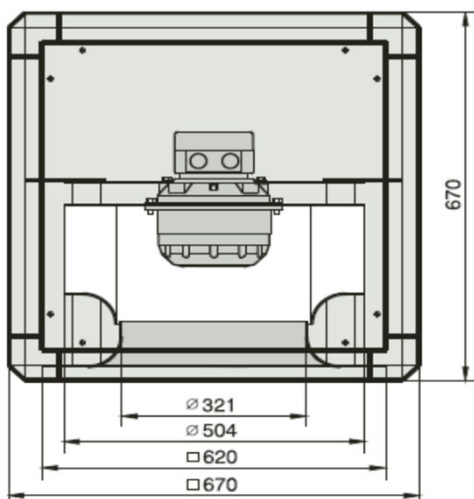
Model UNO 67-500-4E is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

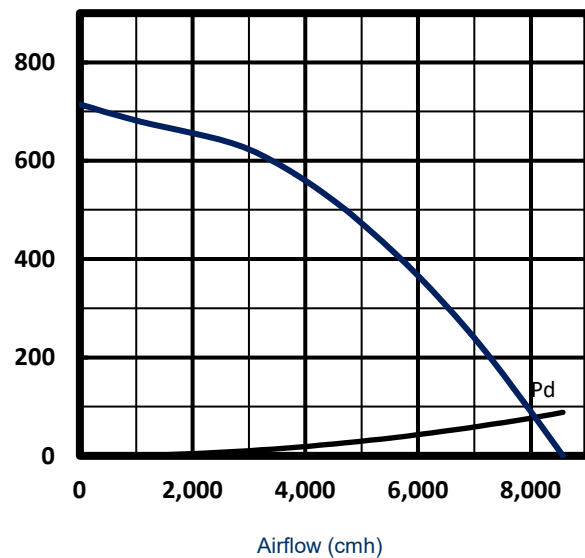
Speeds (RPM) shown is nominal.

## Dimensions:

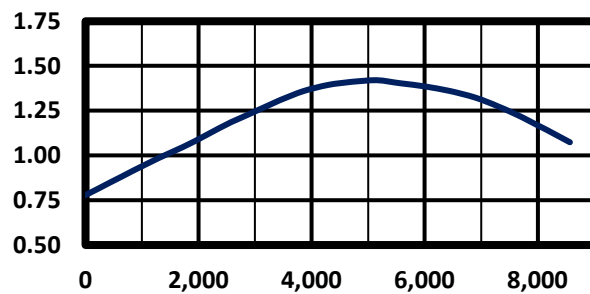
(all dimensions in mm)



Static Pressure (Pa)

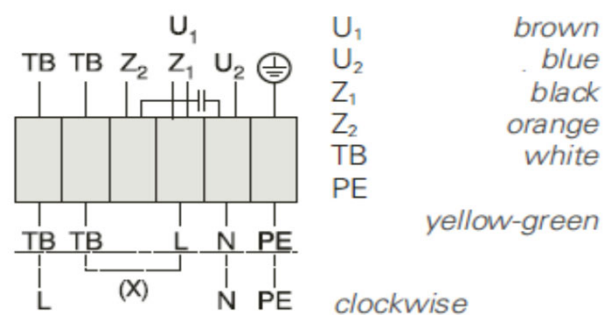


Motor Input Watt (kW)



## Wiring diagram:

01.024





- + 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
- + 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:

	Frequency (Hz)								Total dBA
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	-	59	43	39	36	31	32	44	47
dBA inlet side	-	72	69	68	63	59	55	46	69
dBA Outlet side	-	73	67	67	64	60	56	45	69

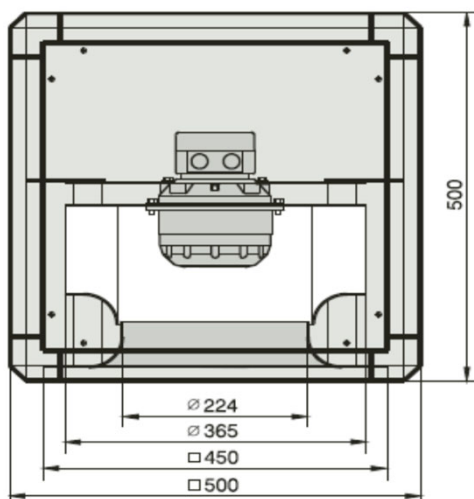
Model UNO 50-355-4D is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

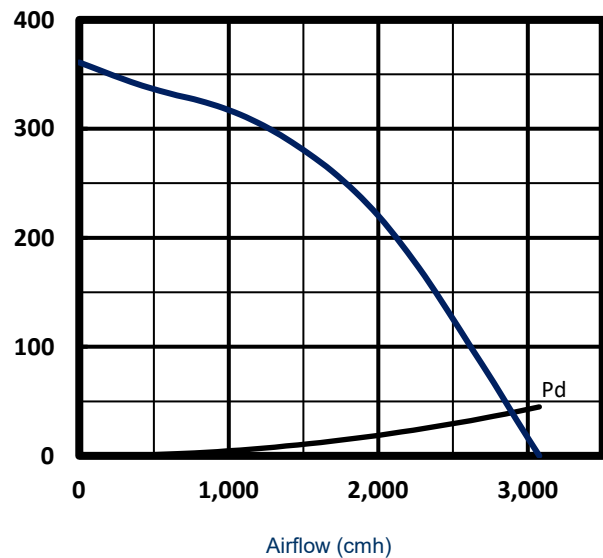
Speeds (RPM) shown is nominal.

## Dimensions:

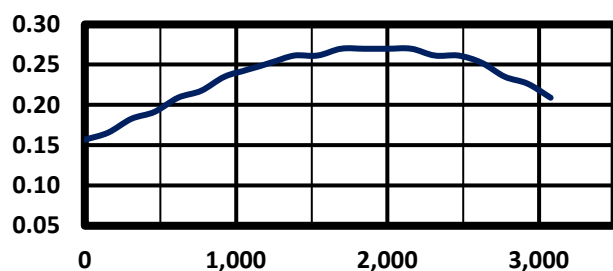
(all dimensions in mm)



Static Pressure (Pa)

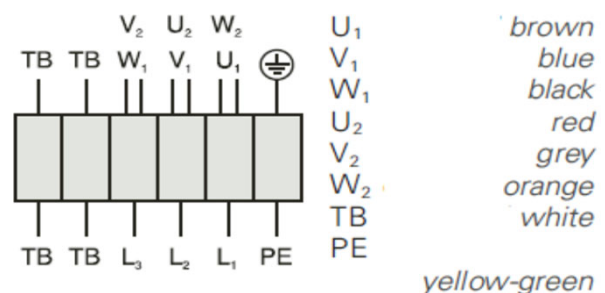


Motor Input Watt (kW)



## Wiring diagram:

01.006







- + 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
- + air performance tested to DIN 24163
- + sound tested in accordance to DIN 45635 part 38

## Technical Data:

Type: <b>UNO-67-400-4D</b>		Art. No. F08-40004	
U	400V (50Hz)	$\Delta p_{fa \text{ min}}$	- 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:

	Frequency (Hz)								Total dBA
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	-	66	50	46	43	38	39	51	54
dBA inlet side	-	77	79	75	68	65	62	57	76
dBA Outlet side	-	82	76	72	72	66	61	54	76

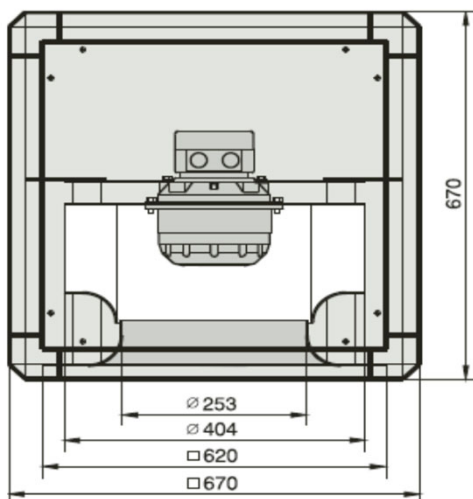
Model UNO 67-400-4D is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

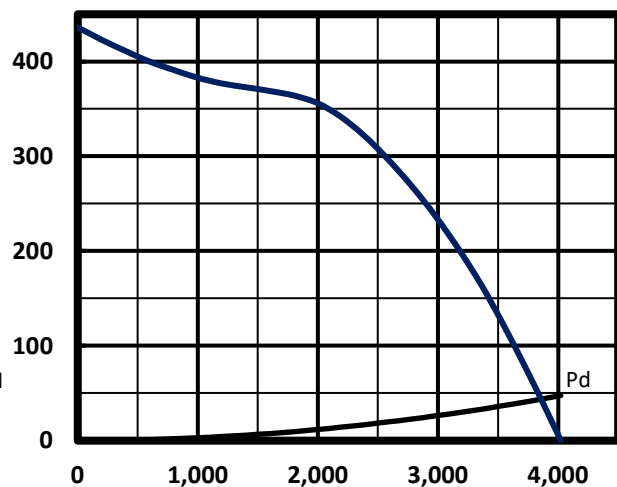
Speeds (RPM) shown is nominal.

## Dimensions:

(all dimensions in mm)

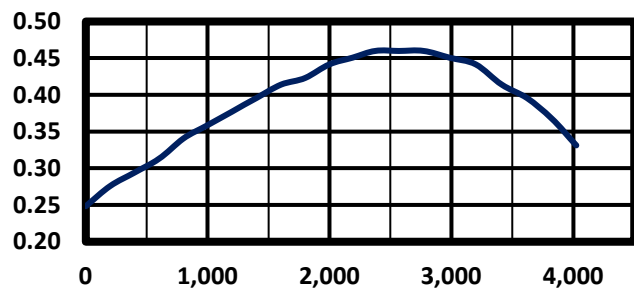


Static Pressure (Pa)



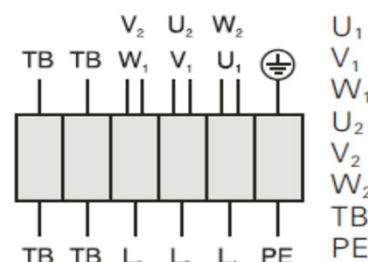
Airflow (cmh)

Motor Input Watt (kW)



## Wiring diagram:

01.006



brown  
blue  
black  
red  
grey  
orange  
white  
yellow-green





- + installation in any position possible
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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:

	Frequency (Hz)								Total dBA
	63	125	250	500	1K	2K	4K	8K	
dBA Casing	-	65	49	45	42	37	38	50	53
dBA inlet side	-	76	78	74	67	64	61	56	75
dBA Outlet side	-	81	75	71	71	65	60	53	75

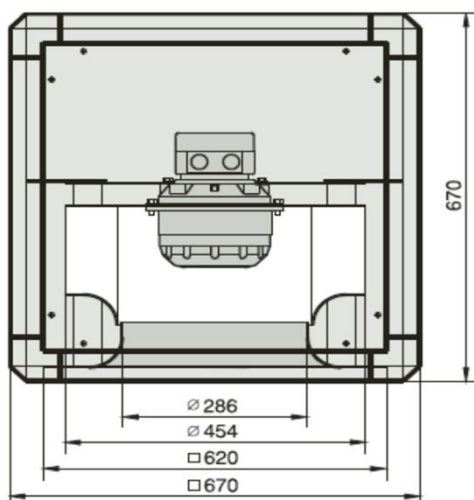
Model UNO 67-450-4DW is not licensed to bear the AMCA Certified Ratings Seal.

Performance is based on actual speed of test.

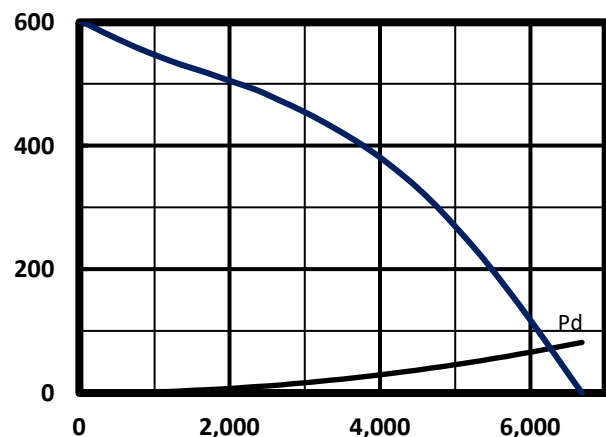
Speeds (RPM) shown is nominal.

## Dimensions:

(all dimensions in mm)

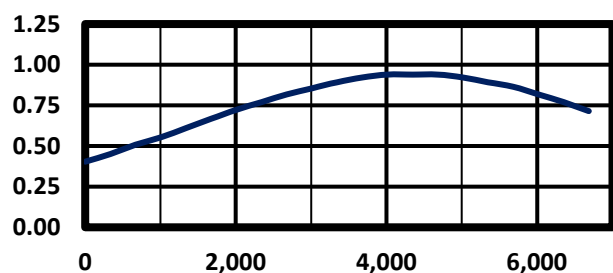


Static Pressure (Pa)



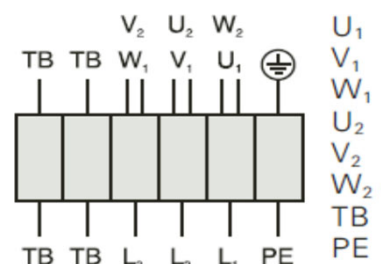
Airflow (cmh)

Motor Input Watt (kW)



## Wiring diagram:

01.006



brown  
 blue  
 black  
 red  
 grey  
 orange  
 white  
 yellow-green



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- + 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-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

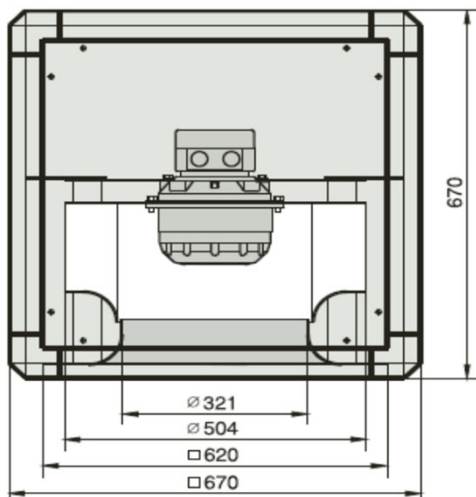
## Sound levels:

	Frequency (Hz)								Total LwIA
	63	125	250	500	1K	2K	4K	8K	
@0Pa 7798cmh	77	90	86	81	75	74	75	69	84
@212Pa 6653cmh	76	92	86	80	74	71	68	63	83
@440Pa 5112cmh	73	90	85	78	72	67	63	60	81
@611Pa 2858cmh	81	86	87	80	73	69	65	61	82

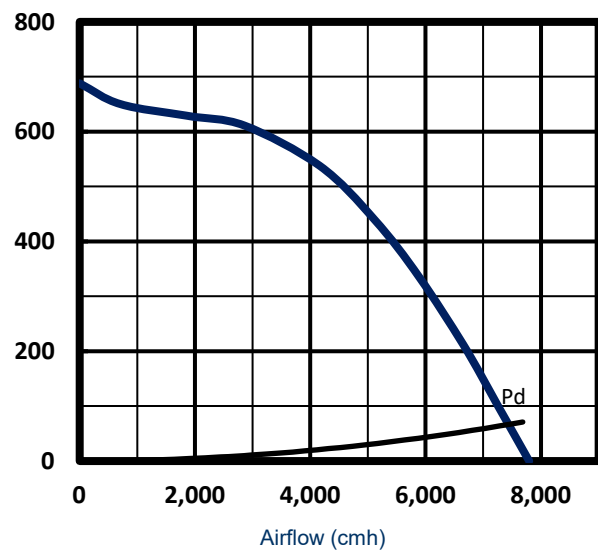
Values shown are for inlet LwI and LwIA sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts, calculated per AMCA International Standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

## Dimensions:

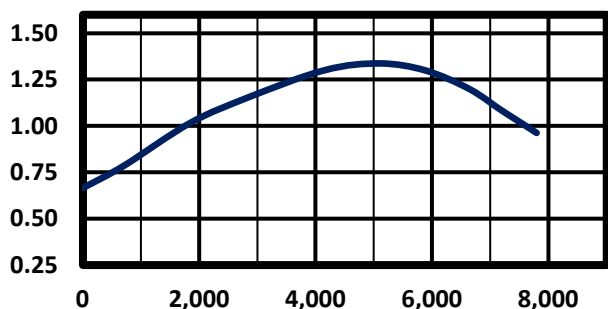
(all dimensions in mm)



Static Pressure (Pa)

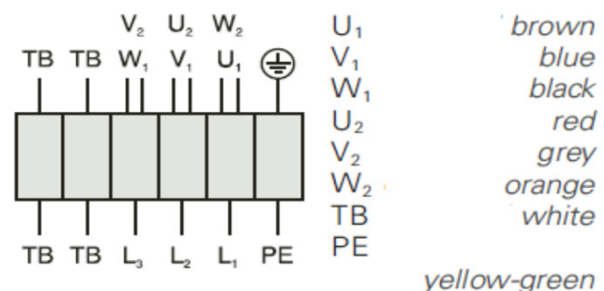


Motor Input Watt (kW)



## 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-80-560-4D</b>		Art. No. F08-56010	
U	400V (50Hz)	$\Delta p_{fa \text{ min}}$	- 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:

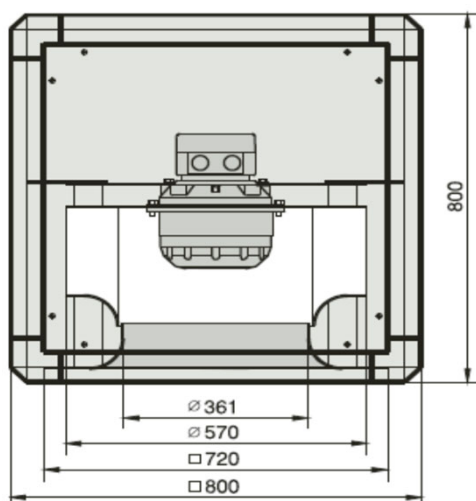
	Frequency (Hz)								Total LwIA
	63	125	250	500	1K	2K	4K	8K	
@0Pa 10656cmh	81	88	89	84	79	78	78	71	87
@234Pa 9000cmh	81	87	86	82	77	74	70	67	84
@472Pa 7164cmh	79	85	84	79	74	70	68	64	81
@724Pa 4176cmh	82	86	82	76	73	71	70	66	80

Values shown are for inlet Lwi and LwiA 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. The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts, calculated per AMCA International Standard 301. Performance is based on actual speed of test.

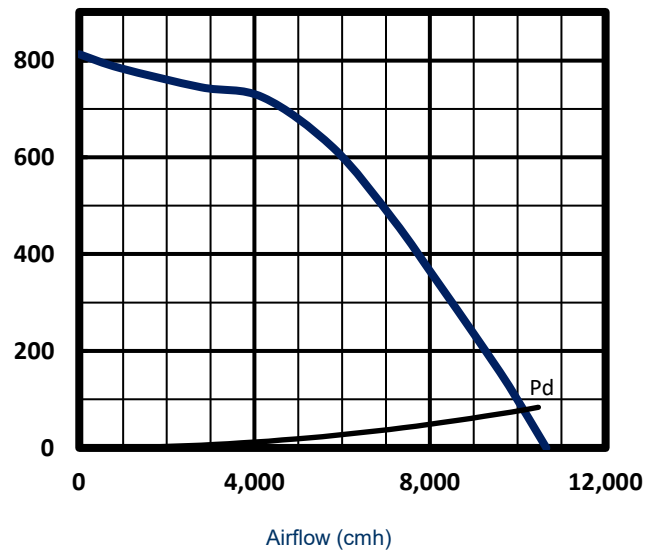
Speeds (RPM) shown is nominal.

## Dimensions:

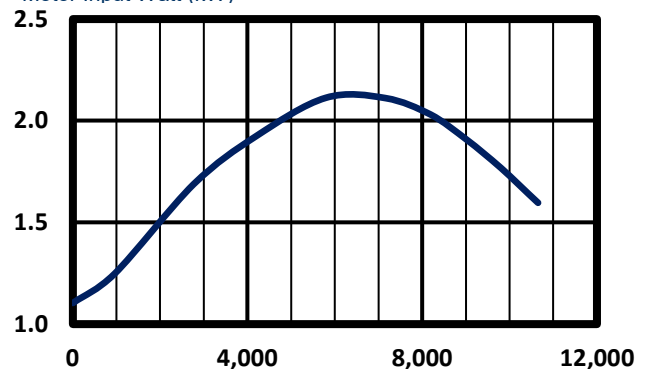
(all dimensions in mm)



Static Pressure (Pa)

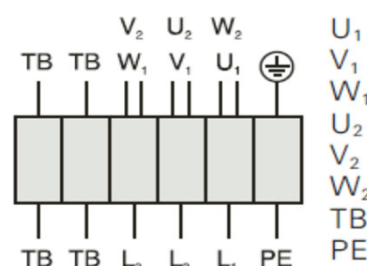


Motor Input Watt (kW)



## Wiring diagram:

01.006



brown  
blue  
black  
red  
grey  
orange  
white  
yellow-green



- + 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)	$\Delta p_{fa \text{ min}}$	- Pa
P1	4.0 Kw	$\Delta I$	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

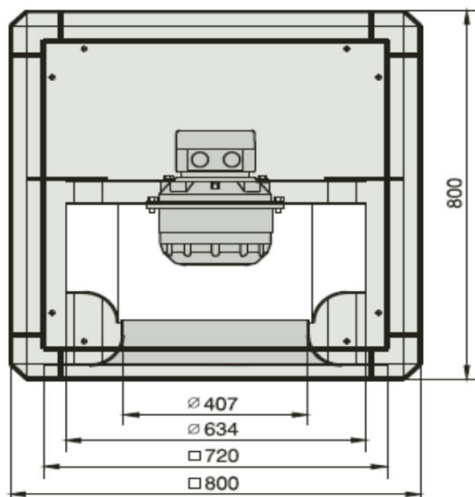
## Sound levels:

	Frequency (Hz)								Total dBA
	63	125	250	500	1K	2K	4K	8K	
@0Pa 12960cmh	88	94	94	90	85	81	79	78	92
@326Pa 10944cmh	88	94	91	88	83	78	76	75	90
@685Pa 8424cmh	87	92	89	85	81	77	74	71	87
@982Pa 4716cmh	89	94	92	86	83	79	76	72	89

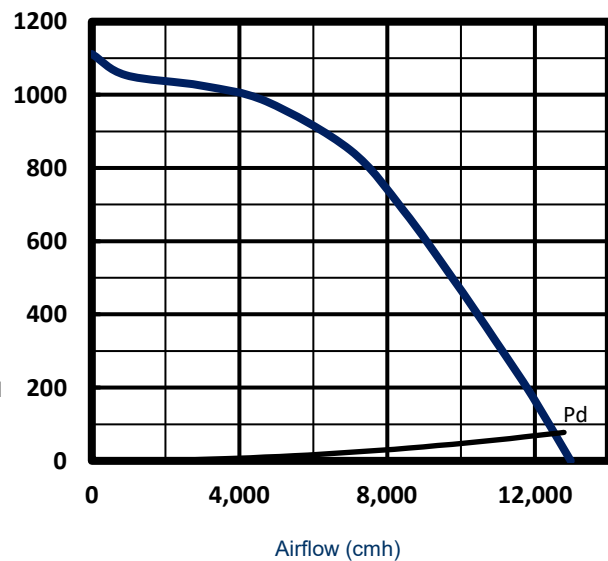
Values shown are for inlet Lwi and LwiA sound power levels for installation type A free inlet, free outlet. The A-weighted sound ratings shown have been calculated per AMCA International standard 301. The sound power level ratings shown are in decibels, referred to  $10^{-12}$  watts, calculated per AMCA International Standard 301. Performance is based on actual speed of test. Speeds (RPM) shown is nominal.

## Dimensions:

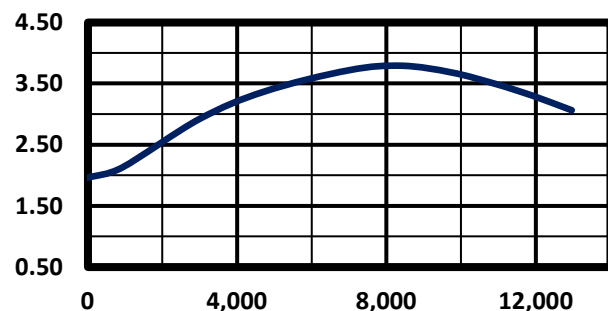
(all dimensions in mm)



Static Pressure (Pa)

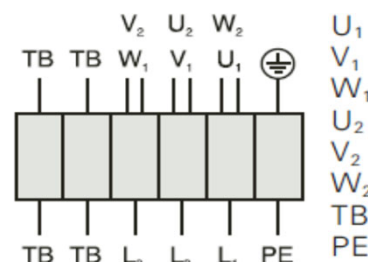


Motor Input Watt (kW)



## Wiring diagram:

01.006



brown  
blue  
black  
red  
grey  
orange  
white  
yellow-green