



*Formula Series Product*

- Volume: 29,000m³/h
- Square Housing Design, Easy Installation
- Maintenance-free Motor
- Optional Gravity Back-draft Damper, Casing With Epoxy Spray Coating
- Explosion Proof Supply / Exhaust (Optional)

**G2.5**

## Company Profile

Shanghai Nautilus General Equipment Manufacturing Co., Ltd. is a middle and high-end solution provider of air supply and gas heating and air cleaning equipment that integrates R&D, production and sales. Established in September, 2003, it is located in the Jiading District of Shanghai. The company is the member of the US Green Building Council (USGBC) and International Air Movement and Control Association (AMCA), the high and new tech enterprise of Shanghai, **INFINAIR®** won the famous trademark in Shanghai.

Vision statement: To become the most trustworthy brand of professional air movement & control and air conditioning.

Mission statement: To provide the most reliable and user-friendly air movement & control and air conditioning service.



## Axial Wheel



250-600mm

General type wheel with external rotor motor



250-550mm

Explosion resistant aluminum wheel (aluminum belongs to non-ferrous metal and the explosion resistant class of fan is Spark C as AMCA-99 standard with the use of explosion resistant motor)



600-900mm

Steel wheel for both general and explosion resistant application (As explosion resistant, the matching inlet venturi is aluminum which belongs to nonferrous metal and the explosion resistant class of fan is Spark C as AMCA-99 standard with the use of explosion resistant motor. )

✓ Stress analyze tested: reliable strength for long time running

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- Computer aided stress analyze
- Strengthen slots properly located: according to repeating test
- Blade end vibration effectively reduced
- Prevent blade distortion or breaking after long time running

✓ Forward sweeping blades: advanced design

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- Optimized according to aero-dynamic simulation
- Wheel balancing level G2.5 (AMCA)
- The blade surface is fluent and streamline, cut into air progressively
- The blade edge angle is properly designed, help reducing turbulence when air break away
- Low noise is kept under large volume



## Product Feature

✓ Motor is inside of air stream and lubrication free: suitable for installing on high wall

- Small size, simple structure, light and stable running
- Motor is inside of air stream: effective cooling extended motor life
- Lubricating free motor: maintenance free unit suitable for installing on high wall
- No belt: no need to climb high to replace belt from time to time

✓ Square housing: reasonable profile

- Square opening in concrete, brick or steel wall: easier
- Single layer steel wall with horizontal support beam: simple and reliable



Epoxy powder coating

✓ Complete accessories available: thoughtful



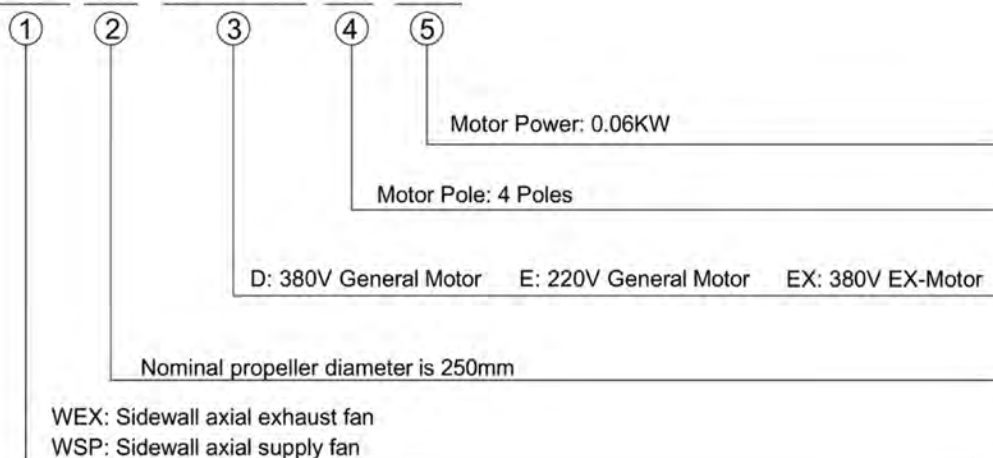
Galvanized housing

- Standard accessories: 45° weatherhood and stainless steel birdscreen (for WEX air exhaust), 90° weatherhood and stainless steel insectscreen (for WSP air supply), safety protective screening and stainless steel fastener.
- Optional accessories: gravity back-draft damper, casing with epoxy spray coating and explosion resistant structure.



## Naming Convention

WEX-250 (D/E/EX) 4 -0.06



## Standard Accessories

- 45° or 90° Weather cover

WEX exhaust fan is with 45° weatherhood, outlet is with stainless steel birdscreen. WSP supply fan is with 90° weatherhood, inlet is with stainless steel insectscreen, prevents insects into workshop. The above two weatherhoods are default and assembled in the factory. Weatherhood can be removed if outer wall is with rain-proof louvers.

- Safety protective screening:

Protect motor and prevent accidental personal injure while motor is operating.

- Stainless steel fastener:

The material of such fasteners as bolts and nuts are stainless steel to prevent getting rusty and corrosive to a certain extent when they are exposed in the air for a long time.

- Wiring suit for General and explosion resistant type

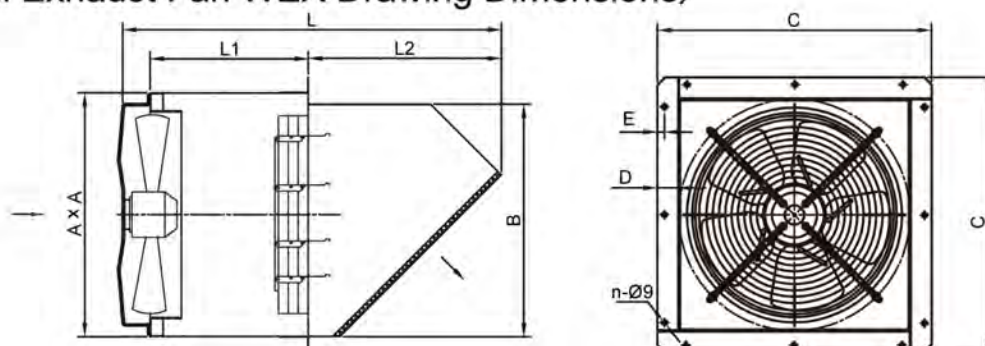
The wiring material of general type is metal hose and that of explosion resistant type is bobbin of explosion resistant.

## Optional Accessories

- Gravity back-draft damper

Flanged aluminum (optional: epoxy spray coating) back-draft damper is light and low pressure loss. It can be opened easily, and closed by gravity which is simple and reliable.

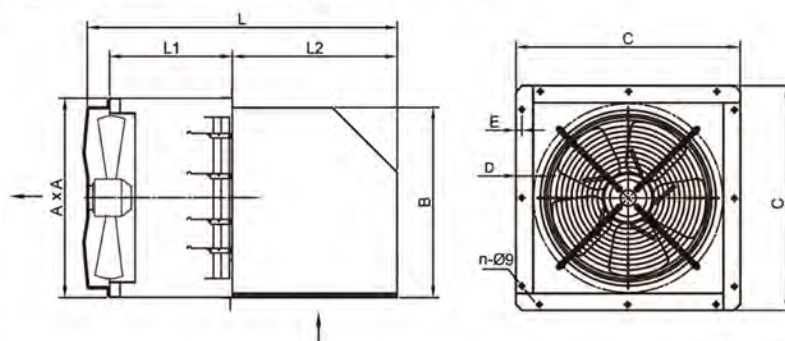
### (Sidewall Exhaust Fan WEX Drawing Dimensions)



Model	A(mm)	L1(mm)	L2(mm)	L(mm)	B(mm)	C(mm)	D(mm)	E(mm)	n	Fan Weight
WEX-250D4/E4-0.05	320	200	295	540	290	400	40	13	8	16
WEX-300D4/E4-0.09	370	200	330	590	340	450	40	13	12	18
WEX-350D4/E4-0.15	420	220	365	665	390	500	40	13	12	24
WEX-400D4/E4-0.19	470	220	400	710	440	550	40	13	12	27
WEX-450D4/E4-0.24	520	220	435	745	490	600	40	13	12	31
WEX-500D4/E4-0.46	570	220	470	780	540	650	40	13	12	37
WEX-550D4/E4-0.55	620	220	500	820	590	700	40	13	12	40
WEX-600D4-0.83	765	220	600	950	735	865	50	15	20	65
WEX-650D4-2.2	810	595	620	1295	780	910	50	15	20	130
WEX-700D6-0.75	855	510	645	1230	825	955	50	15	20	122
WEX-750D6-1.1	920	550	675	1305	890	1020	50	15	24	135
WEX-800D6-2.2	975	645	715	1455	945	1075	50	15	24	170
WEX-900D6-3	1075	630	760	1490	1045	1175	50	15	24	210

The above fan weight is the whole fan weight including motor and gravity back-draft damper. The weight will be less a little if without the damper.

### (Sidewall Supply Fan WSP Drawing Dimensions)

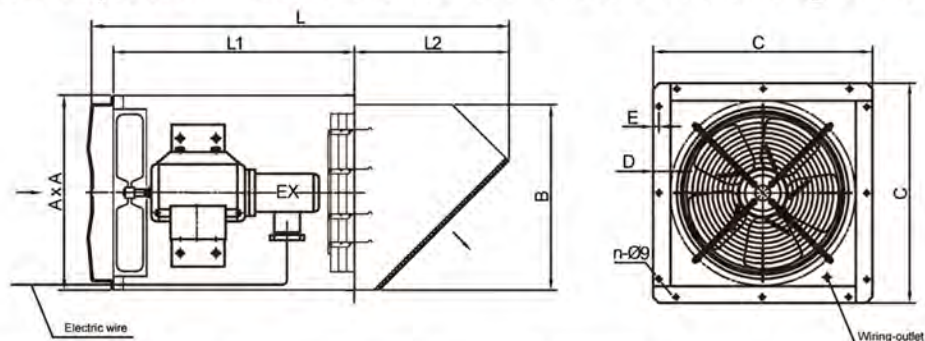


Model	A(mm)	L1(mm)	L2(mm)	L(mm)	B(mm)	C(mm)	D(mm)	E(mm)	n	Fan Weight
WSP-250D4/E4-0.05	320	200	325	570	290	400	40	13	8	17
WSP-300D4/E4-0.09	370	200	365	625	340	450	40	13	12	21
WSP-350D4/E4-0.15	420	240	395	715	390	500	40	13	12	26
WSP-400D4/E4-0.19	470	240	415	745	440	550	40	13	12	30
WSP-450D4/E4-0.24	520	260	465	815	490	600	40	13	12	35
WSP-500D4/E4-0.46	570	260	490	840	540	650	40	13	12	41
WSP-550D4/E4-0.55	620	260	515	875	590	700	40	13	12	45
WSP-600D4-0.83	765	260	615	1010	745	865	50	15	20	93
WSP-650D4-2.2	810	655	615	1345	785	910	50	15	20	145
WSP-700D6-0.75	855	590	625	1290	830	955	50	15	20	138
WSP-750D6-1.1	920	605	625	1305	900	1020	50	15	24	150
WSP-800D6-2.2	975	715	645	1455	955	1075	50	15	24	188
WSP-900D6-3	1075	725	645	1465	1055	1175	50	15	24	238

The above fan weight is the whole fan weight including motor and gravity back-draft damper. The weight will be less a little if without the damper.



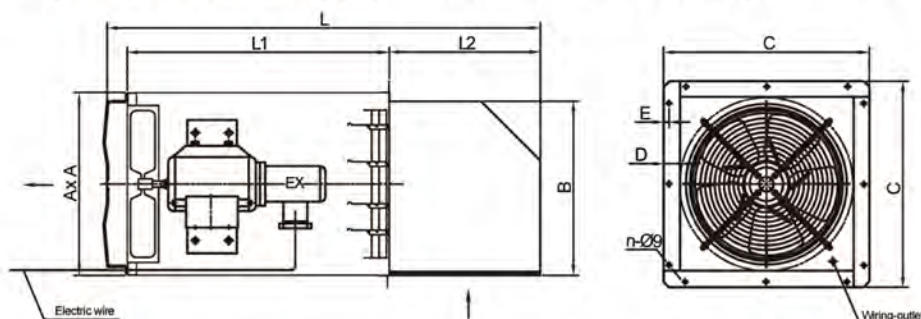
### (Sidewall Explosion Proof Exhaust Fan WEX-EX Drawing Dimensions)



Model	A(mm)	L1(mm)	L2(mm)	L(mm)	B(mm)	C(mm)	D(mm)	E(mm)	n	Fan Weight
WEX-250EX4-0.12	320	465	295	820	290	400	40	13	8	32
WEX-300EX4-0.12	370	465	325	855	340	450	40	13	12	35
WEX-350EX4-0.12	420	465	365	890	390	500	40	13	12	38
WEX-400EX4-0.25	470	505	395	965	440	550	40	13	12	43
WEX-450EX4-0.37	520	505	435	1000	490	600	40	13	12	50
WEX-500EX4-0.55	570	520	470	1050	540	650	40	13	12	65
WEX-550EX4-0.75	620	520	495	1100	590	700	40	13	12	70
WEX-600EX4-1.1	770	490	595	1165	735	865	50	15	20	112
WEX-650EX4-2.2	810	595	620	1295	780	910	50	15	20	140
WEX-700EX6-0.75	855	510	640	1230	825	955	50	15	20	133
WEX-750EX6-1.1	920	550	675	1305	890	1020	50	15	24	145
WEX-800EX6-2.2	975	645	710	1455	945	1075	50	15	24	185
WEX-900EX6-3	1075	630	760	1490	1045	1175	50	15	24	230

The above fan weight is the whole fan weight including motor and gravity back-draft damper. The weight will be less a little if without the damper.

### (Sidewall Explosion Proof Supply Fan WSP-EX Drawing Dimensions)

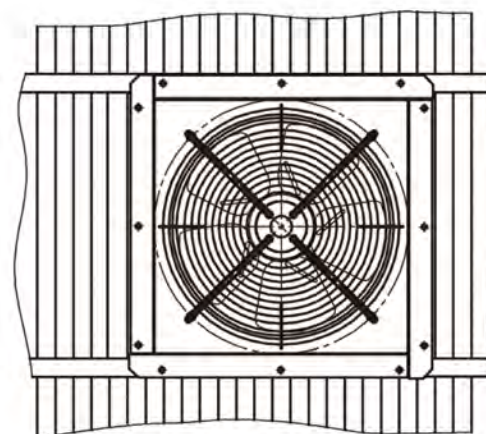
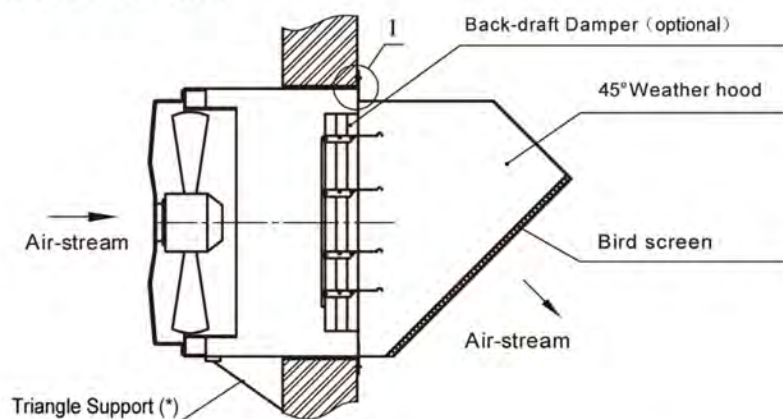


Model	A(mm)	L1(mm)	L2(mm)	L(mm)	B(mm)	C(mm)	D(mm)	E(mm)	n	Fan Weight
WSP-250EX4-0.12	320	510	325	895	290	400	40	13	8	35
WSP-300EX4-0.12	370	540	365	965	340	450	40	13	12	40
WSP-350EX4-0.12	420	570	395	1025	390	500	40	13	12	45
WSP-400EX4-0.25	470	595	415	1070	440	550	40	13	12	51
WSP-450EX4-0.37	520	595	465	1120	490	600	40	13	12	62
WSP-500EX4-0.55	570	610	490	1165	540	650	40	13	12	78
WSP-550EX4-0.75	620	610	515	1205	590	700	40	13	12	83
WSP-600EX4-1.1	770	575	615	1270	745	865	50	15	20	135
WSP-650EX4-2.2	810	655	615	1345	785	910	50	15	20	155
WSP-700EX6-0.75	855	590	625	1290	830	955	50	15	20	158
WSP-750EX6-1.1	920	605	625	1305	900	1020	50	15	24	160
WSP-800EX6-2.2	975	715	645	1455	955	1075	50	15	24	200
WSP-900EX6-3	1075	725	645	1465	1055	1175	50	15	24	250

The above fan weight is the whole fan weight including motor and gravity back-draft damper. The weight will be less a little if without the damper.

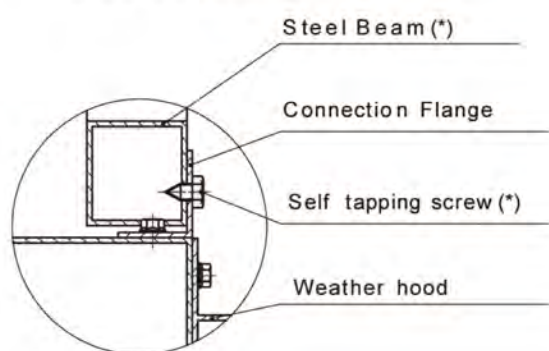


## Installation detail



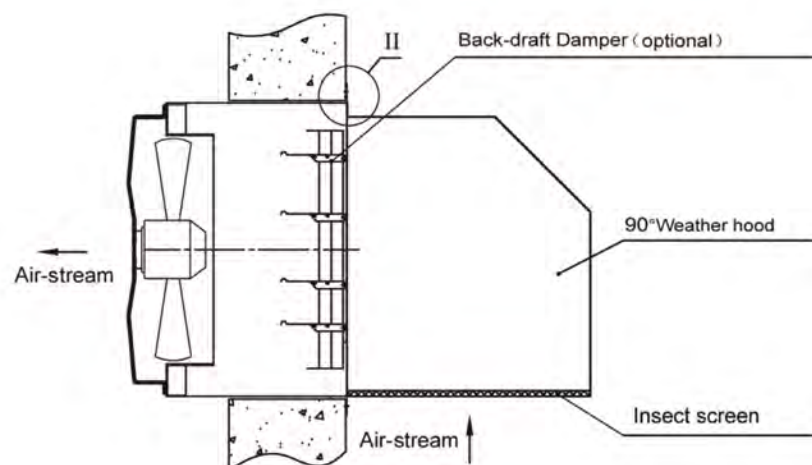
WEX Installation Detail Drawing

### Enlarged Drawing

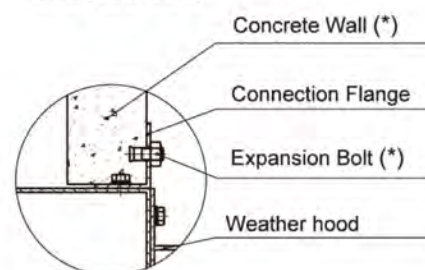


### Wall Opening Size

MODEL	Wall Opening Size (mm) (SQUARE)
WEX/WSP-250D4/E4/Ex4	340 × 340
WEX/WSP-300D4/E4/Ex4	390 × 390
WEX/WSP-350D4/E4/Ex4	440 × 440
WEX/WSP-400D4/E4/Ex4	490 × 490
WEX/WSP-450D4/E4/Ex4	540 × 540
WEX/WSP-500D4/E4/Ex4	590 × 590
WEX/WSP-550D4/E4/Ex4	640 × 640
WEX/WSP-600D4/Ex4	790 × 790
WEX/WSP-650D4/Ex4	835 × 835
WEX/WSP-700D6/Ex6	880 × 880
WEX/WSP-750D6/Ex6	945 × 945
WEX/WSP-800D6/Ex6	1000 × 1000
WEX/WSP-900D6/Ex6	1100 × 1100



### Enlarged Drawing



Note(\*): By others

WSP Installation Detail Drawing

## How to mount the fan

- Concrete wall or brick wall

The installation hole shall be prepared according to "wall opening size" of the catalogue, and calked by foamed polyester to be watertight.

- Pre-fabricated color steel plate wall

Two horizontal beams and two vertical columns shall be equipped around the wall opening, and calked by foamed polyester to be water tight. According to jobsite situation, triangle support or threaded hanging rods are also acceptable.

- Installation recommendation

The height of indoor should be slightly higher than that of outdoor side to avoid leaking due to poor seal.

## Specification

### Section 1: Fan Type

Sidewall axial flow supply / exhaust fan shall be forward sweeping steel or aluminum blades. Blade shall use strengthened rib, enhance intensity, reduce blade end vibration. The blades and motor shall be statically and dynamically balanced after integrated, and meet the requirement of <AMCA (204-1996) > Level G2.5.

### Section 2: Fan housing

Fan housing shall be made of galvanized steel (option: cold rolled panel with statically epoxy powder coating ) in square shape, motor supporting structure shall be solid to prevent resonance during operation. Safe guard shall be installed in the room to protect staff 's personal security.

### Section 3: Explosion resistant structure [ optional ]

Explosion resistant sidewall fan : type ( size: 250~550 ) is aluminum wheel, inlet venturi is per aluminum. type (size: 600~900 ) is steel wheel, inlet venturi is aluminum; Motor is explosion resistant, the general explosion resistant class is ExdIICT4 and the dust explosion resistant class is ExdIIBT4. As the wheel or inlet venturi is aluminum as non-ferrous metal, the explosion resistant class of fan is Spark C as per AMCA standard.

### Section 4: Motor

External rotor motor shall be IP44, internal rotor motor shall be IP54, insulation class F, Motor shall be inside the airstream for cooling. The wiring location of motor depends on customer and the length of outer wiring will be at least half a meter.

**Section 5: Nameplate:** Permanently fixed aluminum nameplate shall be fixed on fan body clearly display fan mark, product model and serial number. The serial number shall be a unique ID for each fan, so that the customer can use this number to find out the parts used to build the fan.

### Section 6: Acceptable manufacturers


Acceptable manufacturers: **INFINAIR®** or equivalent. Design based on **INFINAIR®** model WEX / WSP.



## Typical installation







To provide the most reliable and user-friendly air movement & control and air conditioning service.

Due to continuing research, Shanghai Nautilus reserves the right to change specifications without notice.

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