

INF Series

Induced Flow Jet Fan

誘導式風機





Flowtech Co. Ltd. certifies that the INF series shown herein on pages 9-11 is 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 requirements of the AMCA Certified Ratings Program.

陽鼎實業股份有限公司特此證明，此處所示 INF 系列目錄中，第 9-11 頁獲得了加蓋 AMCA 印章的授權。所示額定值系根據 AMCA 出版物 211 與 AMCA 出版物 311 所進行測試和程序確定，並符合 AMCA 認證額定值計畫的要求。



無通風管通風系統簡介 Introduction to Vent-less Ventilation System

無通風管通風系統由內含之風機單元、小口徑的高速通風管、可動式吹送噴嘴所構成，並且配合送排氣風機產生連動作用，以此進行通風作業。這種新型的通風系統，小口徑的吹送噴嘴連接於風機組，空氣由此高速噴出，誘導周遭空氣形成氣流，將空氣加以移動及攪拌，可以達到均勻之空調、通風效果。此系統施工簡便，可以降低投入的初設成本及運轉成本。由於本系統不需要使用到大口徑的通風管，故稱為「無通風管通風系統」。

The Vent-less Ventilation System comprises the built-in fan unit, high-speed vents with smaller diameter and mobile nozzle, as well as matches with a drain fan for interaction to make ventilation. This novel ventilation system connects to fan sets by means of a nozzle with small diameter. The air is jetted at high speed to induce the ambient air to create the flow. The uniform air conditioning and ventilation can be reached when the air moves and stirs. This system not only can be simply and conveniently constructed, but also the initial equipment investment and operation cost can be reduced. Because this system doesn't need to use the vents with larger diameter, it is called as "Vent-less Ventilation System".

無通風管通風系統特色 Features for Vent-less Ventilation System:

- 降低初次投入的設備成本 Reduction of initial equipment investment
- 節省運轉費用 Save the operation expense
- 施工簡便 Simple and convenient construction
- 減少通風管路佔用空間 Reduction of vent space
- 無通風管通風系統比較表 Comparison of Vent-less Ventilation System

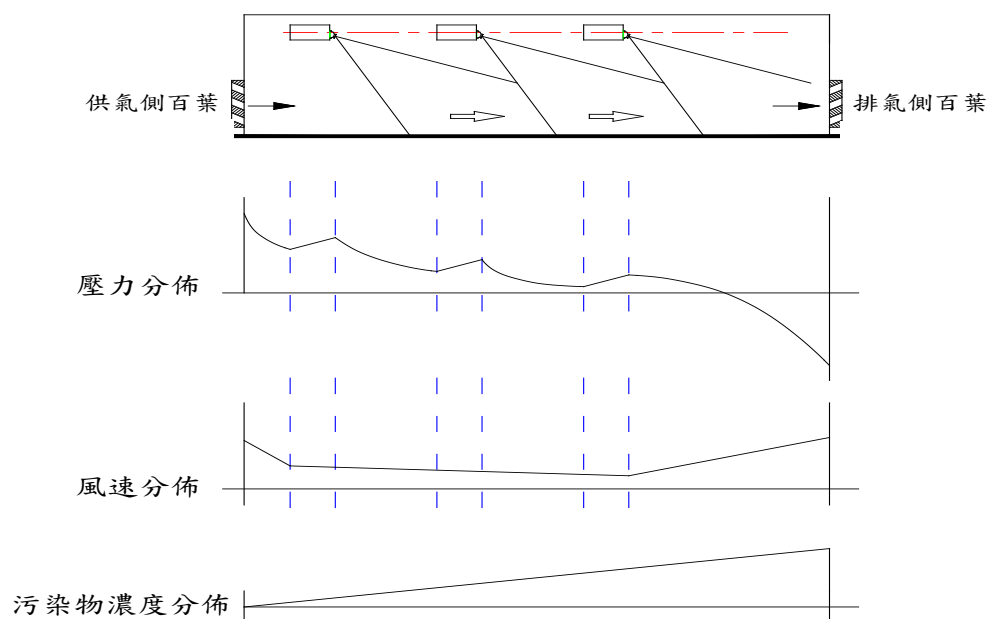
	通風型態 Ventilation Type	設備內容 Facility	一氧化碳(CO)因應方式 Solution to Reduce CO Emission	設備空間 Equipment Space	施工困難度 Construction Difficulty	費用 Construction Expense
無通風管通風系統 Vent-less Ventilation System	整體性的氣體流通 Whole gas flow	利用小口徑通風管，分散安裝小型風扇 Install the vents with small diameter and small fans.	大風量可以稀釋一氧化碳濃度，但對下游會有影響。 Large flow can dilute the CO concentration, but the lower side will be influenced.	通風管尺寸較小，可以降低樓層高度。 The smaller vent size can reduce the floor height.	施工簡便 Simple and convenient construction	便宜 (70%左右) Cheap (about 70%)
全程通風管方式 Full-span Vent	局部供給氧氣、排放廢氣。 Local supply oxygen and emission.	全面配置大型通風管 Fully deploy large vents.	小風量對周圍會有污染，但屬局部污染。 The small flow will pollute the surrounding, but belong to the local pollution.	通風管尺寸大，必須升高樓層高度。 The larger vent size must raise the floor height.	通風管數量很多，施工困難。 The construction will be difficult due to a lot of vents.	昂貴 (100%左右) Expensive (about 100%)



INF-誘導式離心風機可以讓你呼吸新鮮空氣的環境，不同於國內現有地下室、停車場使用的離心式通風機，陽鼎實業股份有限公司開發出全新的INF-誘導式離心風機—整體高度更小、出口速度更快、噴射距離更遠、運轉噪音更低。

以翼截式葉輪代替一般前傾多翼式葉輪，大大提高風機效率，配合外轉子馬達避免入風口受馬達阻礙影響，使風機運轉送風更流暢。在提高效率及節省運轉成本下，讓人充分享受與歐美進口產品同樣的舒適環境。

INF - Induced Flow Jet Fan can provide the environment to breathe fresh air. Different from flow centrifugal fans installed at the basement and parking lot in Taiwan, FLOWTECH GROUP. developed the brand-new INF - Induced Flow Jet Fan – more compact size, faster exit flow, more further sparge distance and lower running noise. The wing-cut impeller instead of multi-wing impeller can greatly enhance the fan efficiency. With the external rotator motor, the entrance will not obstructed by the motor to run fan more smoothly. Owing to the efficiency enhancement and the reduction of the operation cost, the customers can fully enjoy the comfortable environment similar to products imported from US and European countries.



誘導式離心風機流場特性分佈圖

INF誘導式離心風機有何特別的地方 Advantages of INF Induced Flow Jet Fan

誘導式離心風機其功能為誘導及擾流方式來導引氣體，以達到空氣循環及換氣功能，所以誘導式離心風機又可以稱為「擾流式風機」。一般誘導式離心風機多採用的前傾多翼式葉輪，壓力較低且效率較差。因材質為鍍鋅鐵板，重量較重，功率消耗也大。在考量空間因素，馬達須安裝在入風口，減少入風面積，影響效率。經實際實驗室測試後，發現普遍有性能不佳的情形。The functions of Induced Flow Jet Fan are the induction and turbulence to guide air as well as achieve air circulation and ventilation. Therefore, the Induced Flow Jet Fan can be called as “Turbulence Fan”. Most of the Induced Flow Jet Fans use multi-wing impeller with less pressure and worse efficiency. The galvanized plates have heavier weight and larger power consumption. In consideration of space, the motor must be installed at the entrance to reduce the inflow area. After tested by the lab, it is found the performance is not good enough.



因此，陽鼎公司在考量性能條件與空間要求，研發出INF-300系列誘導式離心風機，它的特色為：

Therefore, FLOWTECH develops INF-300 series Induced Flow Jet Fan in consideration of performance and space. The features are:

使用翼截式鋁合金葉輪—重量輕，慣性矩小，效率高，馬達負載不因環境系統壓損而有顯著變化。葉輪材質亦有塑膠材質等可供選用。

Usage of wing-cut aluminum alloy impeller – light weight, small inertia torque, high efficiency and motor load with no obvious change caused by pressure damage from the environment. Furthermore, the plastic impellers can be available.

- 旋壓或油壓成型鐘型入口—氣流進入更加順暢，提高效率。

Whirl or hydraulic bell-shaped entrance – more smooth flow to enhance the efficiency.

- 馬達規格：單、三相，50、60HZ，220V、380V。

Motor specification: single/three-phase, 50/60HZ, 220V/380V.

- 使用單、三相外轉子馬達—入風口不受馬達阻礙，提高效率。馬達冷卻效果更好，而且整體高度大大降低。

Usage of external rotor motor with single/three-phase – The entrance will not be obstructed by the motor to enhance the efficiency and provide the better cooling. Furthermore. The whole height can be greatly reduced.

- 出口安裝鋁合金噴嘴(選擇性配備)—出口角度可隨意自行調整，消除空氣滯留死角。

Aluminum alloy nozzle installed at the exit (optional) – The exit angle can be arbitrarily

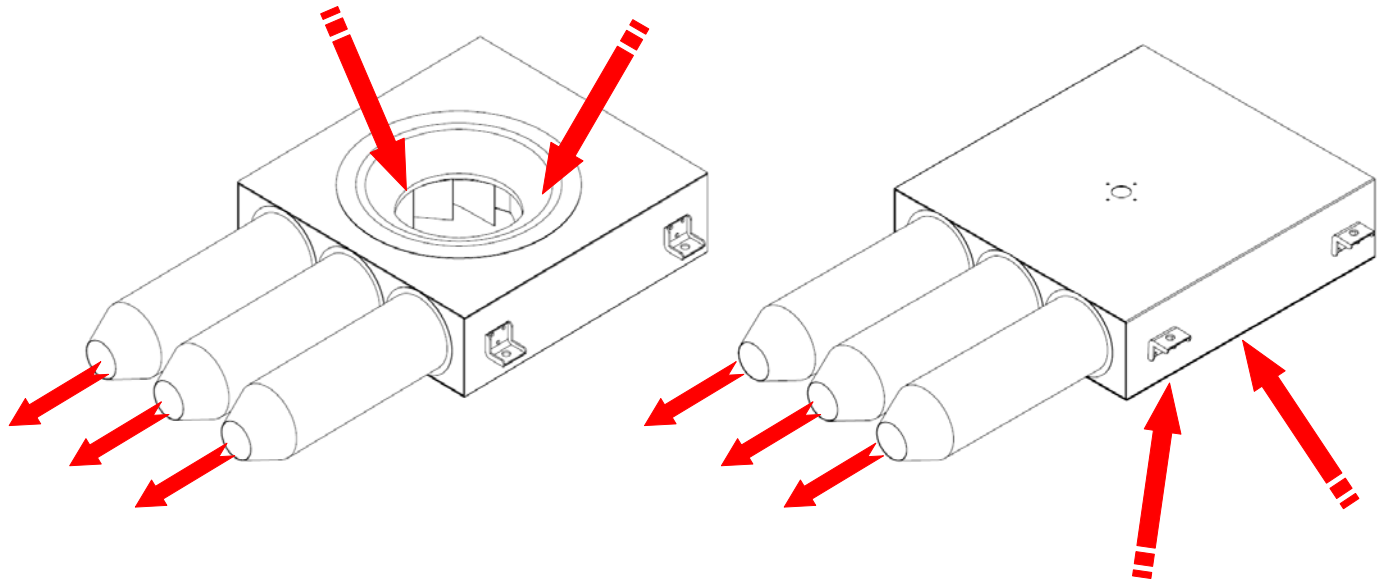
adjusted to eliminate air.

- 入口安裝過濾網—濾除氣流內的懸浮微粒。

Filter installed at entrance – filter particles in the flow.

- 全機以鍍鋅鋼板製造或經烤漆處理—造型美觀。

All manufactured by the galvanized plates or treated with painting – beautiful outlook.



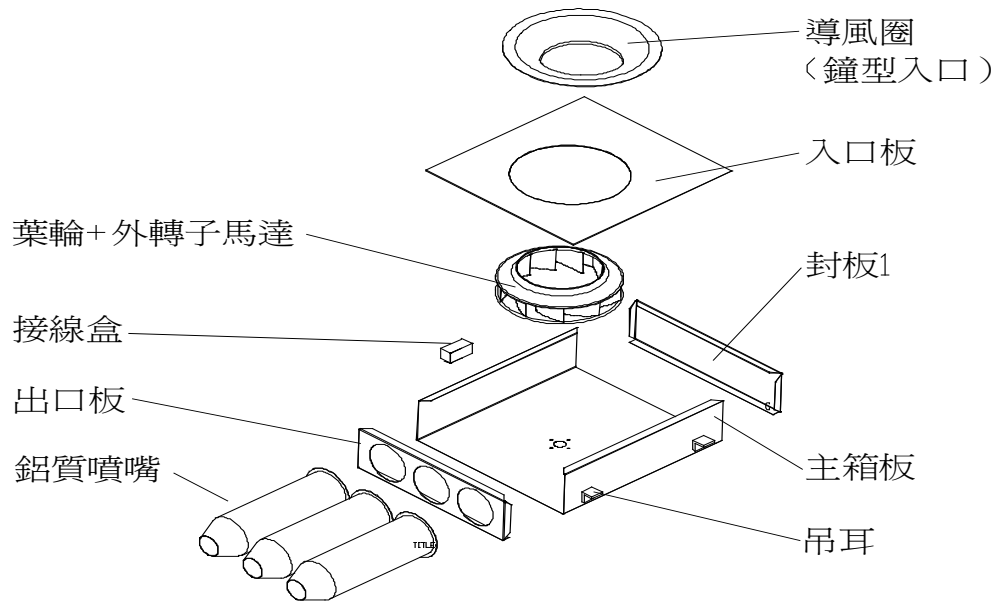
產品代號說明 Product Code Description

INF-300

說明 Description

葉輪公稱直徑 300,355
The wheel diameter:300mm
誘導式離心風機
Induced Flow Jet Fan

技術要點 Technical Specification



機殼 Housing (由主箱板、入口板、出口板、封板組合而成)

鍍鋅鋼材、不鏽鋼或其他材質製作，並由自攻螺絲結合而成；其厚度最小為1.2mm。箱體高度低，利於現場安裝。

The housing is made of galvanized steel, stainless steel or other panels and combines with screw. It has a minimum thickness of 1.2 mm.

葉輪 Wheel

葉片為後傾式。葉輪之材質為鋁合金或塑料製作

Wheels are backward curve blades type. The centrifugal wheel is made of aluminum alloy or plastic

馬達 Motor

依據IEC標準設計，可選擇單、三相，50、60HZ，220V、380V等使用條件。

According to the IEC standard, it can choose a single, three-phase, 50,60 HZ, 220V, 380V and other conditions of use.

導風圈 Shaped Inlets (Inletcone)

透過流體力學的計算與設計，能將氣流發揮完美的導引效果至葉輪上。導風圈將利用由電鍍的薄金屬板或軟鋼或鋁所製作而成。

The aerodynamically shaped inlets are bolted in and guarantee a perfect inlet stream onto the impeller. The inletcone is made of galvanized sheet metal or mild steel or aluminum.

鋁質噴嘴 Aluminum of nozzle

鋁質噴嘴質地輕、拆裝簡單、清洗方便與維護容易。

The nozzle is made of aluminum alloy. It is light, easy to remove, wash and maintain.

選配零件 **Optional Accessories**

鋁合金碗型噴嘴 **Aluminum of bowl nozzle**

此型噴嘴可自由旋轉角度達到擾流效果

This type of nozzle can rotatable angle reaches spoiler effect.

鋁合金長噴嘴 **Aluminum of long nozzle**

此型噴嘴可調整撓度及長短，達到局部及全區擾流效果

This type of nozzle can adjustable deflection and length to reach the local and region spoiler effect.

格柵 **Grille**

格柵可搭配烤漆；且質地輕、拆裝簡單、清洗方便與維護容易。

The grille is anodizes surface. It is light, easy to remove, wash and maintain.

防護網 **Guards**

入口可裝設防護網及濾網

Inlet can equipped with a safety net and filter.

INF-300與他牌離心風機性能比較 Compared to other performance

INF-300 噪音 Sound Performance Data

聲功率 Sound power level :

頻率 Frequency	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	聲功率 dBA	噪音 dBA
聲功率 Sound power	62.1	68.2	67.8	59.8	59.4	52.9	47.5	44.2	64	53

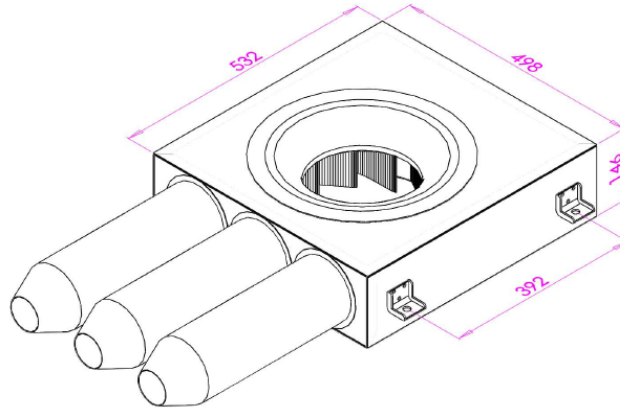
出口加裝各式噴嘴出口風速表 outlet air velocity form

配件型式 Fitting	出口面積 outlet area	出口平均風速 outlet average air velocity	出口風量 Outlet Flow Rate	聲功率 Sound power	噪音 @1m Noise
	m ²	m/sec	cmh	dBA	dBA
長噴嘴 Long nozzle	0.016	16	846	71	64
碗形噴嘴 Bowl nozzle	0.010	17.4	612	69	62
格柵 Grille	0.044	8.12	1284	71	64

誘導式風機 Induced Flow Jet Fan

INF-300 長噴嘴 (long nozzle)

發明專利 Patent NO : I 312288
 新型專利 Patent NO : M301288



Dimensions shown in millimeters
 風機尺寸採用 mm 表示

風機重量：17 kg，機殼最小厚度：1.2 mm，出口平均風速：16 m/s，密度 Density ρ : 1.2 kg/m³

Model	Voltage , V	Amperage , A	Frequency , Hz	Motor Input Power , W	Flow Rate					Octave Bands Sound Power Levels, Lw [dB]								
					RPM	Airflow , m ³ /s	Outlet Air Velocity , m/s	Thrust , N	Thrust/ Fan input Power , N/kW	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	LwA
INF-300 (long nozzle)	380V / 3Ph	0.36	60	159.6	1624	0.247	16.022	4.63	29.01	60	70	72	68	66	62	59	54	71

- The AMCA Certified Ratings Program Seal applies to thrust at free delivery only. Speed (rpm) shown is nominal. Performance is based on actual speed of test. Performance ratings do not include the effects of appurtenances on the inlet and outlet .
- Values shown are for total Lw and LwA sound power levels for Installation Type E: free inlet, free outlet without partition. The sound power level ratings shown are in decibels, referred to 10-12 watts, calculated per AMCA International Standard 301.
- Performance certified is for installation type E-free inlet, free outlet without partition.
- The A-weighted sound ratings shown have been calculated per AMCA International Standard 301.

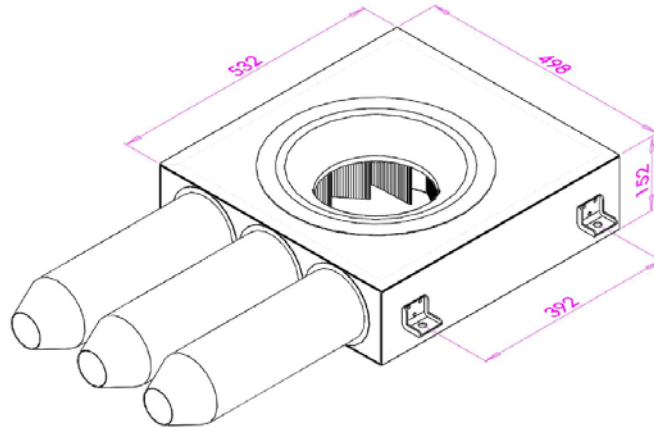


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誘導式風機 Induced Flow Jet Fan

INF-300長噴嘴 (long nozzle)

發明專利 Patent NO : I 312288
 新型專利 Patent NO : M301288



Dimensions shown in millimeters
 風機尺寸採用 mm 表示

風機重量：17 kg，機殼最小厚度：1.2 mm，出口平均風速：15 m/s，密度 Density ρ : 1.2 kg/m³

Model	Voltage , V	Amperage , A	Frequency , Hz	Motor Input Power , W	Flow Rate					Octave Bands Sound Power Levels, Lw [dB]								
					RPM	Airflow , m ³ /s	Outlet Air Velocity , m/s	Thrust , N	Thrust/ Fan input Power , N/kW	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	LwA
INF-300 (long nozzle)	220V / 1Ph	0.7	60	158.5	1486	0.235	15.165	4.193	26.45	60	70	70	65	63	58	55	52	68

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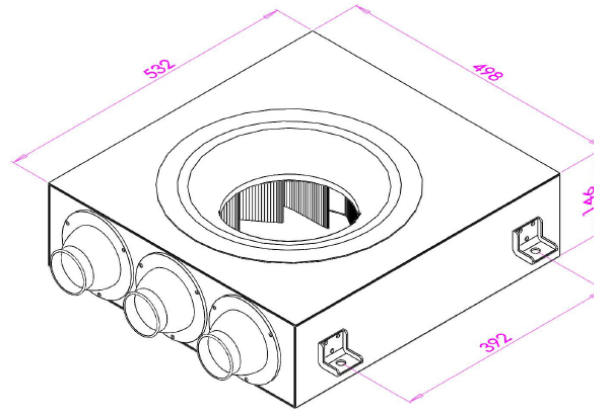


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誘導式風機 Induced Flow Jet Fan

INF-300碗型噴嘴 (bowl nozzle)

發明專利 Patent NO : I 312288
 新型專利 Patent NO : M301288



Dimensions shown in millimeters
 風機尺寸採用 mm 表示

風機重量：17 kg，機殼最小厚度：1.2 mm，出口平均風速：17.4 m/s，密度 Density ρ : 1.2 kg/m³

Model	Voltage , V	Amperage , A	Frequency , Hz	Motor Input Power , W	Flow Rate					Octave Bands Sound Power Levels, Lw [dB]								
					RPM	Airflow , m ³ /s	Outlet Air Velocity , m/s	Thrust , N	Thrust/ Fan input Power , N/kW	63 Hz	125 Hz	250 Hz	500 Hz	1 kHz	2 kHz	4 kHz	8 kHz	LwA
INF-300 (bowl nozzle)	220V / 1Ph	0.693	60	157.2	1492	0.17	17.418	3.483	22.16	63	74	71	65	63	59	55	53	69

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三、產品照片 Product Photo



Photo 1、長噴嘴 (long nozzle)



Photo 2、碗型噴嘴 (bowl nozzle)



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