

# AIR STIRRER



ELLEM INDUSTRIAL  
(SHANGHAI) CO.,LTD

# Introduction

Ellem Industrial (Shanghai) Co., Ltd (hereinafter referred to as "Ellem") is an industrial equipment specialist manufacturer, mainly engaged in R&D, Design and Production of the pneumatic products (such as air motors, air stirrer) and its automation system. Ellem is dedicated to provide excellent solutions for industries such as industrial equipment, energy, electricity, transportation, steel, mining, shipbuilding, etc. We support customers to achieve a safe, reliable, energy-efficient, low carbon emission, and environmental friendly equipment system. By providing high quality products and guaranteeing the availability of spare parts, Ellem satisfies all of our customers' demands. Our goal is to build the best brand of pneumatic equipment in the country, while at the same time elevate the most advanced pneumatic products from China to the global stage.

Ellem obtains a number of research & development achievements and patents in pneumatic automatic control and drive systems by: incorporating more than ten years of domestic and global experiences in the field of pneumatic automation. To our products; integrating today's most advanced industrial design concepts and processing technology; and working closely with the authoritative research institutes and universities in the field of pneumatic automation. Ellem has excellent administration and technology teams in sales, production, and customer service. Aside from providing our users with the most reliable products, Ellem is also capable of providing suitable on-site solutions and services when they are most needed. High quality products, meticulous and professional attitude, and customer-oriented service are what earned Ellem the customers' continuous support and trust.

As we grow, Ellem continues to build upon the acquired technology and experiences to arrive at a breakthrough in the traditional domestic market, while at the same time develops brand new markets for pneumatic products.

The development of Ellem Industrial has always been a clear path because of the followings: constantly challenge ourselves while maintain a professional attitude; entrust in our fast growing team to transform the product improvement from quantitative to qualitative; and never stop in modifying ourselves or in future innovations.



## Certificates of Registration



IS09001

0260

## ● General Information

With a long history, the stirrer has a large number of applications in chemical, pharmaceutical, food, mining, papermaking, coating, metallurgy, wastewater treatment and other industries. The stirrer according to function mode can be divided into mechanical stirring and air flow stirring. Pneumatic Stirrer as a kind of mechanical stirring, which can achieve four kinds of materials stirring, such as liquid - liquid, gas - liquid solid - liquid, gas - liquid - solid. It also has following features:

1. It makes the mutually insoluble liquids mixing properly. And also it achieves homogeneous mixture, emulsion, strengthen the transfer process.
2. It makes the gas fully dispersed in liquid and strengthens transferring or chemical reaction.
3. It achieves homogeneous suspension, and hastens solid dissolve, immersion or liquid - solid chemical reactions.
4. It strengthens heat transferring; prevent local hot or over cold.

Air stirrer is a kind of mechanical agitator; it is driven by air motor, thereby getting more advantages that conventional electric motor does not have.

1. It is an absolutely explosion-proof equipment, thereby, dangerous conditions are suited.
2. It is also suitable for high temperature, moist, dusty conditions.
3. Lubrication free, it is well suited to the clean workshop that food industry, pharmaceuticals industry and electronic industry are needed.
4. Capable of work in overload, it won't be damaging the driven parts after the motor's locked rotor.
5. It achieves infinitely variable speeds, it is also suitable for mixing of different materials.

**Notes: Air stirrer is not allowing to work without load in any conditions.**

## ● Drive Section

### ■ M series Multi-Vane Air Motor

Power of M series ranges from 0.37KW to 7KW, operating speed from 2000 RPM to 6000 RPM. It is suitable for high or middle speed mixing in different volume and viscosity materials. ELLEM air motors adopt ELLEM's constructional design patent, which is available to bear the axial impact force and load. Lubrication free and the wide range of temperature resistant, thereby solving the problems of the lubricating oil pollution, the shaft was deadlocked under the axial impact force and etc.



### ■ Optional component: Air deceleration motor

Clients can mix and match the different type of decelerators to fit their needs. Such as : Helical Gear, Helical Gear (Aluminum Alloy), Planetary Gear, Cycloid Gear and etc. ELLEM Air Deceleration Motor's power ranges from 0.62KW to 6.6KW, operating speed from 14 RPM to 588 RPM. It is suitable for mixing of big volume and Low and middle speed. ELLEM Air Deceleration motor uses high temperature resistant VITON oil seal to prevent oil leakage back to the interior of the motor.



**ELLEM Air Motor Specifications**

Model	Max. Power (KW)	Speed at Max. Power (RPM)	Free Speed (RPM)	Starting Torque(Nm)	Stall Torque (Nm)	Air Consumption at Max. Power (m³/m)	Weight(KG)
M1	0.37	6000	12500	0.6	0.81	1.2	0.8
M2	0.66	3000	8070	2.3	3.1	1.4	3.4
M4	1.1	3000	7900	3.5	5.6	1.9	3.7
M6	2.7	3000	7900	7.2	11.8	3.4	7.4
M8	3.6	2500	7000	13.6	19	4.3	13.4
M10	4.7	3000	7000	15	22	5.6	13.4
M12	7	2000	5000	34	43	7.9	33

**Notes:** Clients can mix and match the different drive ratio decelerators for all the motors in this catalogue to fit their needs. (Please check [ELLEM AIR MOTOR CATALOGUE](#) for detailed information)

**Stirrer Modes**



**1 Cross slab**

It is fixed by a cross slab for achieving a stable and reliable mixing process. It is also suitable for stirring in all kinds of open barrels. Cross slab stirrer is easy to dismantling and convenient for refill materials. It will improve the production efficiency.



**2 Clamp Style**

Once clamping often being used several times. It makes the different pressure at various points of the materials during the process, due to the eccentricity of the mixing center and the center of volume. It can strengthen the relative movement between the liquid layers.



### ③ Flange Style

It is suitable for all kinds of closed and open barrels with simple and convenient installation.



### ④ Manual Lifting Style

It is very easy to adjust the stirring height manually, according to the actual material barrel size. It is suitable for open barrels.



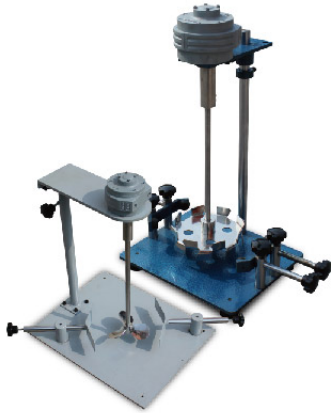
### ⑤ Automatic Lifting style

Pneumatic lift and stirrer, it achieves adjusting of stirring height by a reversing valve only. The operation is simple and convenient.



### ⑥ Mobile Desktop Style

On the basis of a fixed desktop, its bottom is composed of mobile universal wheel for easy moving. It is also suitable for lab paint mixing and the modulation of the materials.



### 7 Fixed Desktop Style

It has four feet at the bottom that stand on the ground for ensuring the level; otherwise the container clamping device can guarantee the stability during the mixing process. It is suitable for paint mixing in laboratory and all kinds of volume mixing.



### 8 Mobile Lifting Style

It achieves adjusting of stirring height by a reversing valve only and also uses universal wheel at the bottom for easy moving. It is suitable for open volume that not easy to move.



### 9 Extensible Style

It uses the folding blade which through the centrifugal force during the stirring process to unfold. It is suitable for all kinds of small diameter and enclosed material stirring barrels.

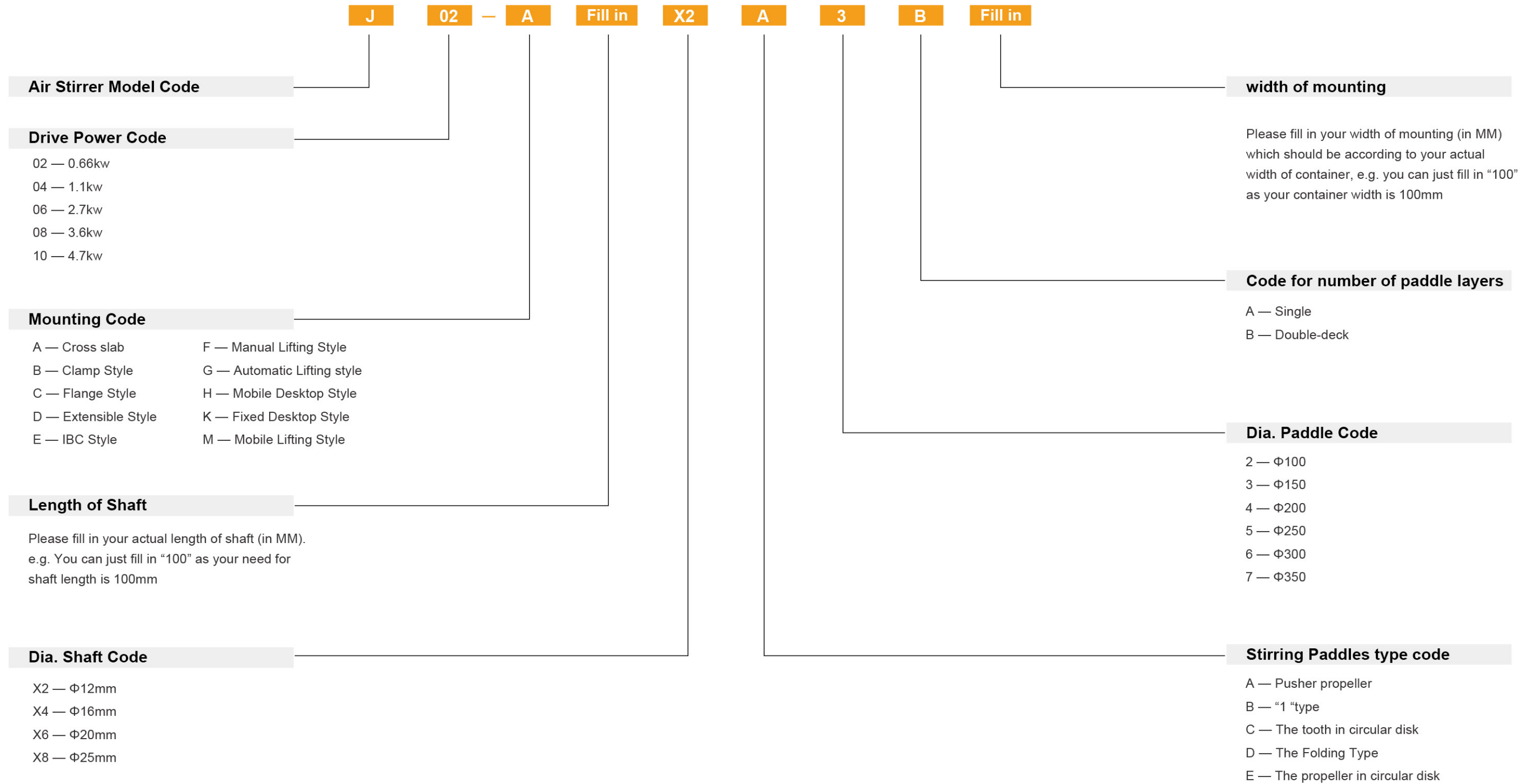


### 10 IBC Style

Using extensible blade, it is entirely suitable for standard IBC barrels.

● Clients can choose different stirring modes in this catalogue to fit their practical needs. At the same time, we also provide customized service for the requirements of non standard.

### Model Number Representation



## ● Stirring Paddles



### **Pusher propeller**

It is a paddle of simple construction, huge volume of circulation and good stability. It has often been used in high speed stirring of the low viscosity fluid.



### **“1” type**

With the distribution of axial and radial, it achieves great rolling power and strong shear force. It is suitable for the stirring of the high viscosity fluid and the solid liquid.



### **The tooth in circular disk**

It has strong circulation ability and the axial distribution. It has good performance of with low power consumption.



### **The Folding Type**

Clients can easily fold their paddle for fit their needs on site. It is suitable for small volume and closed volume stirring.



### **The propeller in circular disk**

It is good in axial distribution and suitable for stirring the blend that has tiny particles. It will prevent the particles precipitation.

● SS304 is the standard material for all above paddles, but SS316 will be an option.



\* Technical data listed in this catalogue are based on the latest information available at the time of printing and are also subject to change without notice.



Please visit our official website

[www.ellem.cn](http://www.ellem.cn)

[www.ellem.com.hk](http://www.ellem.com.hk)

for detailed information of ELLEM's products



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