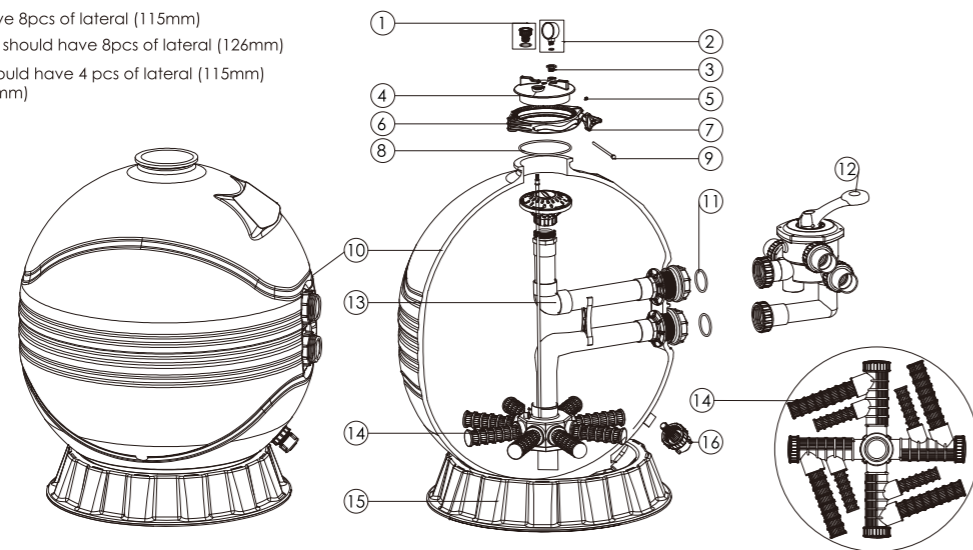


PARTS FOR FILTER MAX FILTER 麦仕沙缸零部件

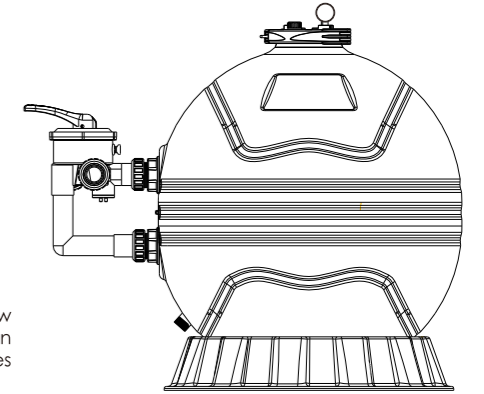
项目	部件编号	英文产品资料/说明	产品资料/说明	数量
Item	Part No.	Product Description	Chinese Product Description	Qty
1	89010701	Air Release Valve with Oring	排气阀	1
2	06021002	Maximum 40PSI Indication, Plastic Pressure Gauge	带密封圈的塑料压力表 (40psi)	1
3	E190109	Connector for Pressure Gauge/Stopper	压力表牙套连胶圈	1
4	01201022	Lid (Transparent)	盖子 (透明)	1
5	03021035	M6 Nut	M6螺母	1
6	89012512	Clamp Kit	链式颈环夹	1
7	01111101	Star-Shaped Nut	星形螺母	1
8	02010007	O-Ring	密封圈	1
9	112000017	M6×125mm Screws	M6×125螺丝	1
10	89012606	17" Tank Assembly	MFS17 缸身连底座	1
10	89012607	20" Tank Assembly	MFS20 缸身连底座	1
10	89012608	24" Tank Assembly	MFS24 缸身连底座	1
10	89012609	27" Tank Assembly for MFS27A	MFS27A 缸身连底座	1
10	89012620	27" Tank Assembly for MFS27	MFS27 缸身连底座	1
10	89012610	31" Tank Assembly for MFS31A	MFS31A 缸身连底座	1
10	89012621	31" Tank Assembly for MFS31	MFS31 缸身连底座	1
10	89012622	35" Tank Assembly	MFS35 缸身连底座	1
11	02011003	O-Ring for 1.5" adaptor	1.5寸阀门接头密封圈	1
11	02020016	O-Ring for 2" Connector	2寸阀门接头密封圈	1
12	88280811	1.5" Side Mount Valve for MFS17/MFS20/MFS24/MFS27A/MFS31A	1.5寸侧阀门配MFS17/MFS20/MFS24/MFS27A/MFS31A	1
12	88280812	2" Side Mount Valve for MFS27/MFS31/MFS35	1.5寸侧阀门配MFS27/MFS31/MFS35	1
13	89012601	The Inner Tank System for MFS17	MFS17缸内系统	1
13	89012602	The Inner Tank System for MFS20	MFS20缸内系统	1
13	89012603	The Inner Tank System for MFS24	MFS24缸内系统	1
13	89012604	The Inner Tank System for MFS27A	MFS27A缸内系统	1
13	89012605	The Inner Tank System for MFS31A	MFS31A缸内系统	1
13	89012617	The Inner Tank System for MFS27	MFS27缸内系统	1
13	89012618	The Inner Tank System for MFS31	MFS31缸内系统	1
13	89012619	The Inner Tank System for MFS35	MFS35缸内系统	1
14*	01172007	Laterals (115mm)	底管 (115mm)	8
14*	01172008	Laterals (126mm)	底管 (126mm)	8
14*	01172010	Laterals (185mm)	底管 (185mm)	4
15	01111059	16-18 inch Filter Base	过滤器底座, 用于MFS17/MFS20	1
15	01111062	21-28 inch Filter Base	过滤器底座, 用于MFS24/MFS27A/MFS27	1
15	01112037	31-35 inch Filter Base	过滤器底座, 用于MFS24/MFS27A/MFS27	1
16	89011601	Water Drain Set	排水套件	1

14* MFS17/ MFS20 should have 8pcs of lateral (115mm)
 14* MFS24/ MFS27A/ MFS31A should have 8pcs of lateral (126mm)
 14* MFS27/ MFS31/ MFS35 should have 4 pcs of lateral (115mm)
 and 4pcs of lateral (185mm)



FILTER MAX SERIES 麦仕系列沙缸

MODEL(型号): MFS17 / MFS20 / MFS24 / MFS27A / MFS27 / MFS31A / MFS31 / MFS35



Your Emaux "Filter Max" Filter is a high performance corrosion-proof filter that has superior flow characteristics that is with the ease of operation. Everything is made simple from installation, operation to the maintenance of the filter. Your "Filter Max" filter will be your pool filtration partner that provides clear water with the least maintenance hassle and care.

麦仕系列过滤器是一款高性能、耐腐蚀的过滤器，其流动性出众，操作简便。从过滤器的安装、操作到维修，样样简单可行。麦仕过滤器是您的泳池过滤伙伴，为您提供清澈的池水，却只要求最少的维护和保养。

WARNING BEFORE INSTALLATION BE SURE TO READ ALL INSTRUCTIONS AND WARNINGS CAREFULLY. KEEP THIS USER MANUAL FOR FUTURE REFERENCE.
 请确保安装前认真阅读所有的操作说明和警告信息。保存本手册，以备未来参考。

HOW IT WORKS

The Filter uses special sand to remove dirt particles from pool water. Filter sand is loaded into the filter tank to act as the filtration media. The pool water which contains dirt particles is pumped through your piping system to the filter via the filter control valve. As pool water passes through the filter, dirt particles will be caught by the sand bed and filtered out. The cleaned pool water is returned from the bottom of the Filter Tank, through the control valve and back to the pool through your piping system. The entire process is continuous and automatic. It is this process that provides the filtration and circulation of water in your pool.

With the filtration process, dirt will accumulate and becomes saturated in the filter tank. Pressure in the tank will increase and the resistance of water flow will occur. This means it is time to clean (backwash) your filter. Another indication to know when to clean (backwash) the filter is by checking the pressure gauge reading. Backwash operation should be performed when the pressure increases by 10psi above the pressure when it was clean. Typically a clean filter will run at 10 to 15psi, so take note of the pressure gauge reading when the filter was installed. When the pressure reaches approximately 20 to 25psi or 50% increase from the clean reading, proceed to the Backwash operation.

WARNING: turn off the pump before switching the control valve handle.

To perform the Backwash operation, position the handle on the control valve to "Backwash", the water flow is automatically reversed through the filter so the water is directed from the bottom of the tank, up through the sand, flushing the trapped dirt and debris out of the waste line. The duration of the backwash operation will depends on how dirty your filter is. Check the sight glass to see when the water becomes clear. It is recommended that the backwash should be at least 2 minutes long.

Once the backwash operation had been completed, the filter should go through the process of "Rinse" and then back to "Filter". To perform the different operations, position the handle on the control valve as indicated.

Under low temperature shut off condition, it is strongly recommend to turn to WINTERISE position and discharge all the water inside filter through the bottom drain.

过滤器如何工作

过滤器使用特别的沙子清除池水中的灰尘颗粒。过滤沙作为过滤介质装入过滤缸。含有灰尘颗粒的池水经过过滤器控制阀，穿过管道系统，被泵送到过滤器中。当池水经过过滤器时，灰尘颗粒被沙层捕获及滤出。净化过的池水从过滤器缸底部、穿过控制阀，通过管道系统返回泳池。全部过程是连续和自动的。这就是泳池池水的过滤和循环过程。

在过滤过程中，灰尘将在过滤器缸里聚集并变得饱和。缸内压力会增加，水流的阻力也会出现。这意味着是时候清洁（反冲洗）过滤器了。另一种现象也可让您了解是否应该清洁（反冲洗）过滤器了，那就是检查压力表的读数。当此时的压力比过滤器干净时的压力大10psi以上时，应该进行反冲洗了。一个典型的干净过滤器会在10至15psi之间运行，所以安装好过滤器后，要记下当时的压力表读数。当压力达到大约20至25psi或超过干净时的读数的50%时，要对过滤器进行反冲洗。

警告:转动控制阀的手柄之前，要先关闭水泵。进行反冲洗时，把控制阀手柄放到“Backwash”（反冲洗）位，水流自动反向流经过滤器，这样水流从滤缸底部向上导流，经过沙子，把收集到的灰尘和杂质冲到废水管。反冲洗持续的时间取决于过滤器脏污的程度。透过观察孔检查水何时变得清澈，建议反冲洗应至少持续2分钟。反冲洗一旦完成，进行“Rinse”（冲洗）过程，然后回到“Filter”（过滤）。执行不同的操作时，控制阀的手柄要放到有相应指示的位置。气温较低，产品停业运行时，建议缸头手柄拨到结霜档位，同时打开底排水，排空缸内过滤水。

INSTALLATION

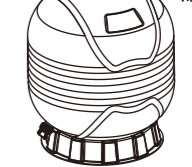
Installation had been made simple, the only tools needed is a screwdriver and pipe sealant for plastic.

The filter should be installed as close to the pool as possible, but keep a distance of at least 5 feet (1.5m). Locate the Filter on rigid, level surface, preferably in a dry, shaded, and well-ventilated area. Prior to installation give consideration to the following: Position of suction, return, and waste connections. Access for backwashing operation and servicing; protection from sun, rain, splashing, etc; Drainage of filter room; Ventilation and protection of the motor.

- 1) Fill the tank with water to the level that covers the laterals (crepinas), or about 1/3 of the tank height is recommended. This will avoid damages to the laterals (crepinas) by the force of the sand when pouring into the filter.
- 2) Pour the recommended amount of sand into the tank, making sure that the centre-pipe remains centred and vertical.
- 3) Level the surface of the sand upon completion.
- 4) Remove the Sand Fill Cover.
- 5) Carefully remove all sand particles from the valve mounting surface.
- 6) Place the O-ring into the groove on the tank.
- 7) Lower the Multiport Control Valve carefully into position so that its underside engages with the centre-pipe. Rotate the valve until the inlet is approximately in line with the pump.

MFS17, MFS20, MFS24, MFS27A
MFS27, MFS31A, MFS31, MFS35

1. Place on tank opening.
放在缸口上
2. Add water to cover laterals and add sand.
加水盖住底管并加入沙子



- 8) Place the clamp set around the tank and the valve. Secure using the screw provided.
- 9) Firmly tap with a rubber mallet outside of the clamps as you tighten the screw.
- 10) Tighten the screw until the Multiport Control Valve is properly assembled to create a water tight seal. Do not over tighten.
- 11) Install the pressure gauge into the threaded opening on the Multiport Control Valve.
- 12) Install the union sets and the backwash union set.
- 13) Connect pump to the control valve opening marked "PUMP".
- 14) Make return to pool pipe connection to control valve opening marked "RETURN".
- 15) Connect the waste water pipe to the control valve opening marked "WASTE".
- 16) To prevent water leakage, be sure all pipe connections are tight.
- 17) Prior to starting the filtration process by turning on the pump, we highly recommend that you read through the pump instruction manual to ensure proper installation and to avoid the risk of electric shock.

安装
 安装简单，所需的工具仅仅是一个螺丝刀和用于塑料的管密封胶。过滤器应尽可能地安装在靠近泳池的地方，但是要保持在至少5英尺（1.5米）的距离。过滤器要放置在坚硬而平坦的表面，最好在干燥、阴凉和通风良好的地方。安装之前，还要考虑下列因素：抽水、回水和废水连接管的位置；留出反冲洗操作和维修所需的通道；防晒、防雨、防喷溅等；过滤器的排水系统；电机的通风和保护。

- 1) 在缸内充水，建议水位盖住底管或大约为滤缸高度的1/3。这样可避免沙子倒入过滤器时其力量对底管造成破坏。
- 2) 把推荐量的沙子倒入缸内，确保中心管保持在中心位及直立。
- 3) 完成后把沙子表面抹平。
- 4) 卸下充沙盖。
- 5) 小心清除掉阀门安装表面上的沙子颗粒
- 6) 把密封圈放入缸体的凹槽里。
- 7) 小心地把多路控制阀放到位，使其底面与中心管啮合。转动阀门直至进水口与水泵大约一致。
- 8) 把夹式锁制套在缸体和阀门上。用随机供应的螺丝固定好。
- 9) 在紧固螺丝时，用一个橡胶锤在夹式锁制外轻轻敲打。
- 10) 紧固螺丝，直至多路控制阀安装正确，严密防水。不要拧得过紧。
- 11) 把压力表安装到多路控制阀的有螺纹的接口上。
- 12) 安装接头套件和反冲洗接头套件。
- 13) 把水泵连接到控制阀标有“PUMP”（水泵）字样的接口上。
- 14) 把回到泳池的管子连接到控制阀标有“RETURN”字样的接口上。
- 15) 把废水管连接到控制阀标有“WASTE”（废水）字样的接口上。
- 16) 为了防止漏水，确保所有管道连接紧密。
- 17) 在打开水泵启动过滤过程之前，强烈建议阅读水泵操作手册，确保水泵安装正确，避免发生电击危险。

START-UP PROCEDURE

- 1) Be sure the correct amount of filter sand media is in the tank and all connections have been made and are secure.
- 2) Turn the Control Valve handle to the "Backwash" position. Press the handle downward before turning.
- 3) Start the pump according to pump instruction manual (be sure all suction and return lines are open).
- 4) Once water flow is steady out the waste line, run the pump for at least 2 minutes. The initial backwashing of the filter is recommended to remove any impurities or fine sand particles in the sand media.
- 5) Turn the pump off and set the control valve to RINSE position. Start pump and operate until water in sight glass is clear about 1/2 to 1 minute. Turn pump off, set valve to FILTER position and restart pump. Your filter is now operating in the normal filter mode, filtering particles and dirt from the pool water.
- 6) Take note of the initial pressure gauge reading for future reference. Variation may occur from pool to pool.
- 7) Adjust pool suction and return valves to achieve desired flow. Check system and filter for water leaks and tighten connections, bolts, nuts as required.

NOTE: During the initial clean-up of the pool water, it may be necessary to backwash frequently due to the unusually heavy initial dirt load in the water.

IMPORTANT: To prevent unnecessary strain on piping system and control valve, always turn off the pump before changing the operation of the control valve. To prevent damage to the pump and filter and for proper operation of the system, clean pump strainer (basket) and skimmer basket(s) regularly.

MULTIPOINT CONTROL VALVE FUNCTIONS:-

FILTER gives downward flow through the filter bed. This position can also be used for vacuuming.
BACKWASH gives upward flow through the filter bed that removes the dirt from the sand and carries it to the waste.
WASTE is for pumping water from the pool. It allows the flow from the pump to bypass the filter and go directly to the waste. You can also use this position to vacuum heavy concentration of debris.
RECIRCULATE bypasses the filter to circulate water through the pool system.
RINSE gives a downward flow that settles the filter bed after backwashing and carries any remaining loose dirt to the waste.
CLOSED prevents only backflow of water from pool during pump

maintenance.

To WINTERISE, set the control valve handle in the middle between RINSE and FILTER. This will allow air to leave or enter the tank to help priming and draining. Only to be used when the pump is off.

VACUUMING THE POOL

Light Soil: set the control valve to FILTER position.
 Heavy Soil: set the control valve to WASTE position.

启动程序

- 1) 确保滤缸里有数量正确的过滤沙媒质，已完成所有的连接并固定好。
- 2) 把控制阀手柄转到“Backwash”（反冲洗）位。转动前把手柄向下按压。
- 3) 按照水泵说明书手册启动水泵（确保所有抽水和回水管道是开着的）。
- 4) 一旦水流从废水管平稳流出，让水泵运转至少2分钟。首次反冲洗时建议清除沙媒质中的杂质或细沙颗粒。
- 5) 关闭水泵，把控制阀转到RINSE（冲洗）位。开启并运转水泵至1分钟，直到观察孔里的水变得清澈为止。关闭水泵，把阀门转到FILTER（过滤）位，重新启动水泵。过滤器现在以正常过滤模式运转，过滤池水中的颗粒和灰尘。
- 6) 记录下压力表的初始读数以备将来参考。不同的泳池之间会有差异。
- 7) 调节泳池的抽水或回水阀门，以达到理想的流量。检查系统和过滤器是否有漏水现象，按要求紧固各接头、螺栓和螺母。

注意: 在初次清洁池水的过程中有必要频繁进行反冲洗,因为水中初始的灰尘量异常严重。

重要: 为了防止对管道和控制阀造成不必要的压力，每次在改变控制阀的操作之前都要关闭水泵。为了防止对水泵和过滤器造成损害以及维持系统的正常运作，要定期清洁水泵滤网（滤桶）和撇渣器桶。

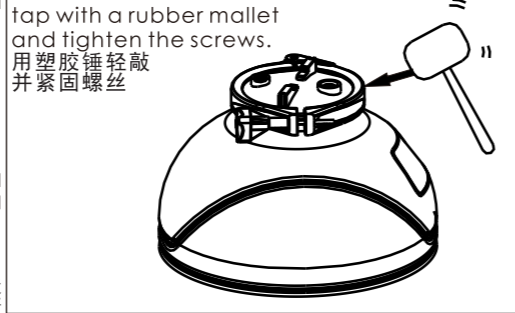
多路控制阀的功能:

FILTER (过滤) 使水向下流动通过滤层。此位置也可以用于真空吸尘。
BACKWASH (反冲洗) 使水向上流动通过滤层。这样可清除沙子中的杂质并把杂质带到废水管。
WASTE (废水) 用于从泳池里泵水。它使水泵里流出的水绕过过滤器直接流到废水管里。也可以利用此位置用真空吸尘器清扫严重堆积的杂物。
RECIRCULATE (循环) 绕过过滤器，通过泳池系统对水进行循环。
RINSE (冲洗) 使水向下流动，在反冲洗之后沉淀滤层，把剩余的松散的灰尘带到废水管。
CLOSED (关闭) 只是为了防止维修水泵期间水从泳池逆流。

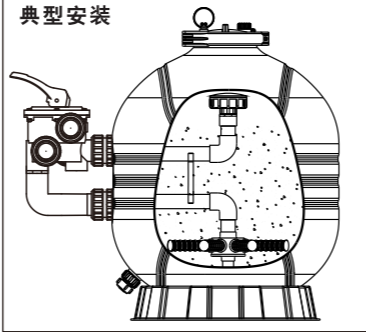
准备过冬时，把控制阀手柄转到RINSE（冲洗）和FILTER（过滤）位置之间的中间位。这样可允许空气留在或进入过滤桶，帮助启动和排水。只能在水泵关闭时使用。

用真空吸尘器清扫泳池
 轻度脏污：控制阀设在FILTER位。
 重度脏污：控制阀设在WASTE位。

FIGURE3.- Clamp Installation
 FIGURE3. - 夹式锁制的安装



TYPICAL INSTALLATION
 典型安装



WINTERISING

Backwash the filter for at least thirty minutes before closing down the pool for winterising. This will clean the filter bed thoroughly.

- 1) Drain the filter tank by removing the drain cap at the base of the filter tank. Leave the cap off during winter.
- 2) Set the control valve handle between the RINSE and FILTER. This will lift the handle and help with the draining process by allowing air to enter into the tank.
- 3) Unscrew the pressure gauge from the control valve and store the gauge indoor.
- 4) Drain and winterise pump according to pump instructions.
- 5) Repairs should be made during the off-season when the best service is available, do not leave them until the next season.

TROUBLE SHOOTING

SAND ENTERING THE POOL

Sand too small; Flow too high; Sand bed calcified; Broken Laterals; Loose centre-pipe; Too much sand; Control Valve not engaged; Air accumulation in filter.

SAND OUT OF BACKWASH HOSE

Flow too high; Too much sand in tank.

INADEQUATE FILTERING

Dirty build up; Improper sand; Sand bed is too low; Algae in filter; Excessive dirt in pool; Calcified sand bed; Heavy swimmer load; Flow rate too high or too low; Backwashing cycle too short; Backwash line too small.

SHORT FILTER CYCLE

Dirty filter; Improper sand; Sand bed is low; Algae in filter; Excessive dirt in pool; Calcified sand bed; heavy swimmer load; Flow rate too high or too low; Backwashing cycle too short; Channels low; Backwash adapter in wrong location; Channels in sand.

FILTER LEAKS

Tank cracked; Drain plug not tight; Valve/Tank O'ring damaged.

CONTROL VALVE LEAKS

Handle not properly engaged; Valve/Tank O'ring damaged; Valve cover O'ring damaged. Pressure gauge O'ring damaged.

ABNORMAL LOSS OF POOL WATER

Leak inside Control Valve; Leakage from pool or piping.

HIGH PRESSURE FILTER

Dirty filter; Calcified sand bed; Return lines too small.

LOW PRESSURE IN FILTER

Control Valve incorrectly set; Pump running too slow (plugged or clogged); Air leakage into pump suction.

POOL CHEMISTRY GUIDELINES 泳池化学组成指南

SUGGESTED POOL CHEMISTRY LEVELS 建议泳池的化学组成水平	ACTION REQUIRED TO CORRECT POOL CHEMISTRY 调整泳池化学组成所需的行动	
	TO RAISE 提高	TO LOWER 降低
PH 7.2 to 7.6	Add Soda Ash 加入碳酸钠	Add Muriatic Acid or Sodium Bisulphate 加入盐酸或硫酸氢钠
TOTAL ALKALINITY 总碱度 100 to 130 ppm	Add Sodium Bicarbonate 加入碳酸氢钠	Add Muriatic Acid 加入盐酸
CHLORINE (UNSTABILIZED) 氯 (不稳定的) 0.3 to 1.0 ppm	Add Chlorine Chemical 加入氯化学制品	No action-chlorine will naturally dissipate 无需行动-氯会自然消散
CHLORINE (STABILIZED) 氯 (稳定的) 1.0 to 3.0 ppm	Add Chlorine Chemical 加入氯化学制品	No action-chlorine will naturally dissipate 无需行动-氯会自然消散
CHLOR! NE STAB! LIZER (Cyanuric Acid) 氯稳定剂(三聚氰酸) 40 to 70 ppm	Add Stabilizer 加入稳定剂	Dilution-partially drain&refill pool with water that has not been treated with Cyanuric Acid. 稀释-部分排水&泳池内重新充入,未经三聚氰酸处理的水

SPECIFICATIONS 规格

MODEL 型号	MFS17	MFS20	MFS24	MFS27A	MFS27	MFS31A	MFS31	MFS35
CODE 编号	88012626	88012627	88012628	88012629	88012630	88012631	88012632	88012633
Effective Filtration Area (m²) 有效过滤面积 (m²)	0.14	0.20	0.28	0.36	0.36	0.47	0.47	0.61
Max Flow Rate (LPM) 最大流量 (LPM)	117	167	233	240	300	313	392	508
Max Flow Rate (m³/h) 最大流量 (m³/h)	7.0	10.0	14.0	14.4	18.0	18.8	23.5	30.5
Turnover Capacity (In Gallons) - 8 Hour 周转能力 (In Gallons) - 8小时	15840	22176	30202	41184	42874	47309	52166	65261
Turnover Capacity (In Gallons) - 10 Hour 周转能力 (In Gallons) - 10小时	19800	27720	33752	51480	53592	59136	65208	81576
Turnover Capacity (In Gallons) - 12 Hour 周转能力 (In Gallons) - 12小时	23760	33264	45302	61776	64310	70963	78250	97871
All Sand Required (kg) 所需沙量 (kg)	40	70	125	185	185	250	250	325
A(mm)	355	396	430	480	460	506	508	564
B(mm)	418	459	493	543	546	569	594	650
C(mm)	670	760	825	946	946	968	968	1086
D(mm)	195	225	280	300	300	370	370	440
E(mm)	425	500	600	675	675	775	775	875
F(mm)	125	125	125	125	130	125	130	130

