



Oil Skimmer

— Disk type

油水分離機
DG SERIES



CNC車床/加工中心機/車銑磨複合加工機. 各類工具母機. 油水分離機
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Oil Skimmer (disk type)

Introduction

Oil skimmer, whose main purpose is to separate oil from water, extends the coolant's life-time and helps improve the environment of your workplace. Welltech Machinery's oil skimmers can be applied to all coolants of all kinds of CNC machine tools. It's easy to install and easy to operate. More than fifty thousand of oil skimmers has been sold in Taiwan and throughout the world.

Specification

DG-220TS	
Disk diameter	220mm
Water depth	130mm
Dimension after installation	330*200*120 (L*W*H)
Voltage	AC110V/AC220V
Power	15W
Capacity	8L / hr

DG-260TSL	
Disk diameter	260mm
Water depth	140mm
Dimension after installation	390*250*150 (L*W*H)
Voltage	AC110V/AC220V
Power	15W
Capacity	10L / hr

D300	
Disk diameter	300mm
Water depth	95mm
Dimension after installation	470*240*180 (L*W*H)
Voltage	AC110V/AC220V
Power	25W
Capacity	12L / hr

DG-310TSL	
Disk diameter	310mm
Water depth	170mm
Dimension after installation	430*240*150 (L*W*H)
Voltage	AC110V/AC220V
Power	15W
Capacity	12L / hr



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DG-400TSL	
Disk diameter	400mm
Water depth	210mm
Dimension after installation	540*234*198 (L*W*H)
Voltage	AC110V/AC220V
Power	15W
Capacity	15L / hr

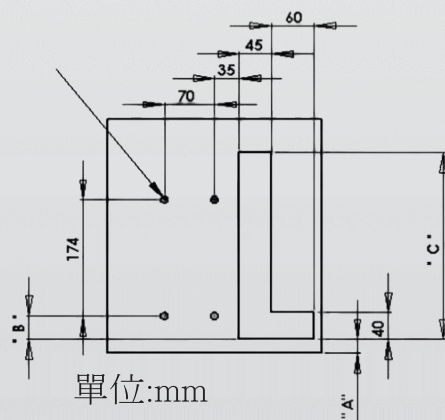
DG-550TBL	
Disk diameter	550mm
Water depth	290mm
Dimension after installation	530*240*295 (L*W*H)
Voltage	AC110V/AC220V
Power	25W
Capacity	20L / hr

Accessories / Model	DG-220TS	DG-260TSL	D-300	DG-310TSL	DG-400TSL	DG-500TBL
Oil-water separating tank	●	●	●	●	●	NA
Waste oil tank	●	●	NA	●	●	●
Timer	●	●	NA	●	●	●

Installation

Please follow the following steps to install the oil skimmer onto the coolant.

STEP 1



Unit: mm

DG220TS: 尺寸A: 15mm

B: 15mm

C: 250mm

DG260TSL: 尺寸A: 20mm 以上

B: 35mm

C: 280mm

DG310TSL: 尺寸A: 40mm 以上

B: 60mm

C: 330mm

DG400TSL: 尺寸A: 60mm 以上

B: 100mm

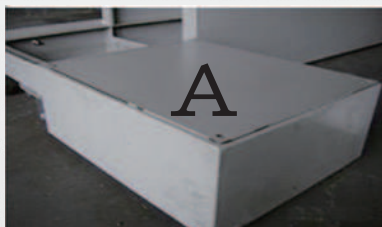
C: 420mm



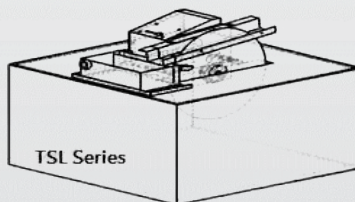
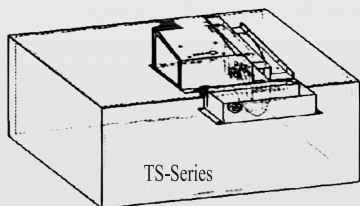
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STEP 2

Cut the sheet metal of the coolant (Place A) so that the oil skimmer can be installed onto it. Please adjust the cut size accordingly.

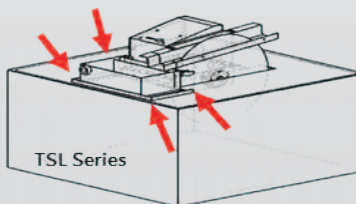
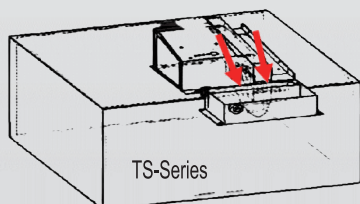


The installation should be completed like this:



STEP 3

Use two screws for TS Series and four screws for TSL Series to fix the oil-water separating tank, so that water flows back to the coolant while waste oil flows into the waste oil tank. Please refer to the following sketches for the places to turn the screws.



The TS series's oil-water separating tank should be fixed at the edge of the coolant.

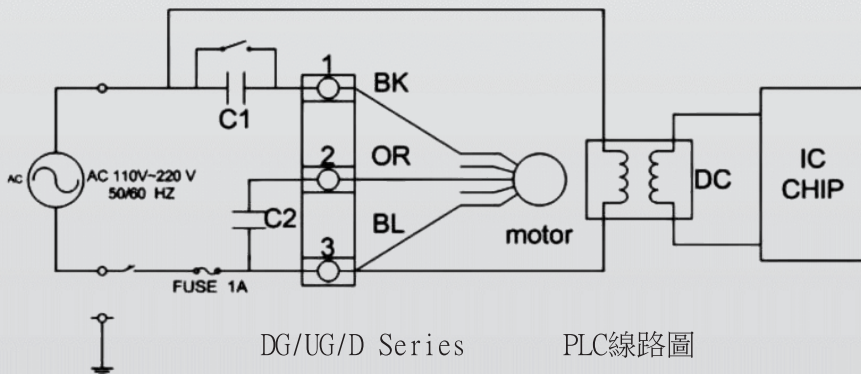
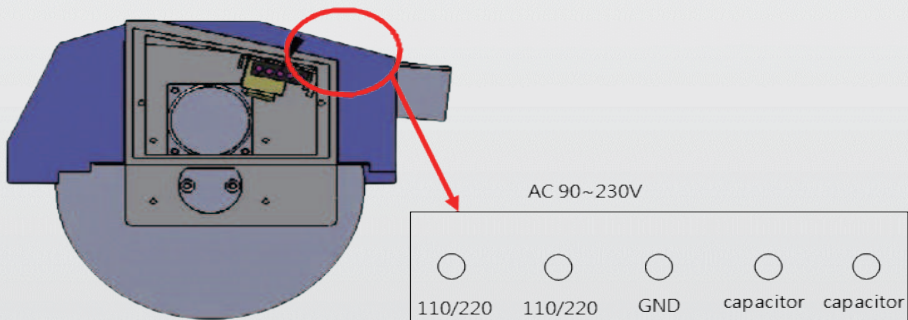


POWER

Before connecting to the main power, please check if the voltage of the power supply is the same with your model to protect the motor and circuit board.

Please use only AC110V / AC220V 1-phase voltage for DG-Series and D300TBL.

Please see the following illustration for the terminal block of the oil skimmer.



DG/UG/D Series

PLC線路圖



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Panel instruction

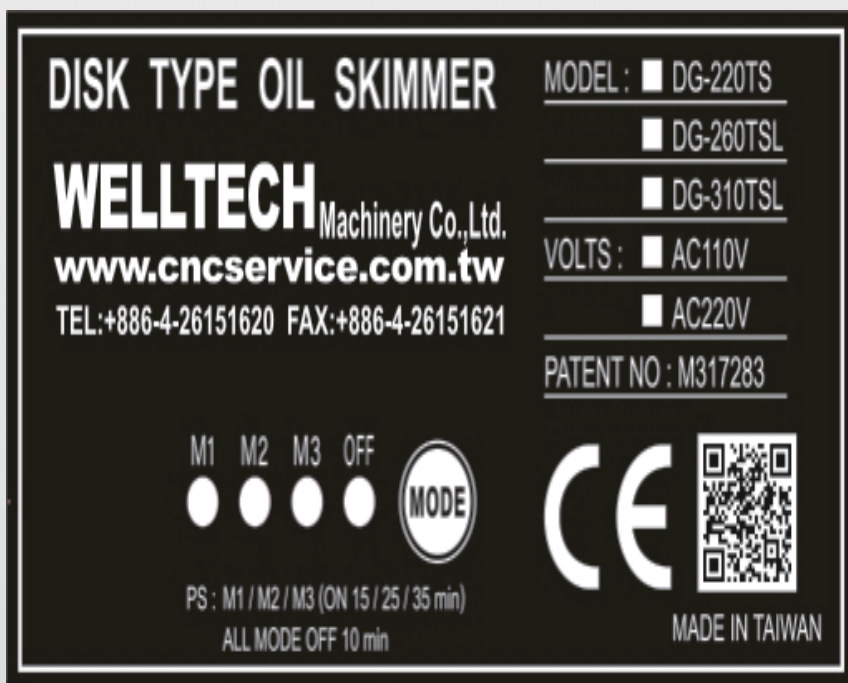
Simply plug-in to turn on the oil skimmer. Tapping the "MODE" bottom to switch between modes. To turn of the oil skimmer, tap the "MODE" bottom several times to switch to the "OFF" mode.

M1 : The oil skimmer will pause for 10 minutes, after each 15 minutes run.

M2 : The oil skimmer will pause for 10 minutes, after each 25 minutes run.

M3 : The oil skimmer will pause for 10 minutes, after each 35 minutes run.

Please note that pauses are necessary for the oil to converge to be more easily collected.





Maintenance

Please check the wipers and remove all the bits and chips weekly.

Please check if the motor functions well every six months.

Specifications of the supplies:

DG-Series Motor: AC110V~AC220V / 60 HZ / 13~15W / 15 rpm

Disk: Stainless Steel #430 / Diameter 220/260/300/310/400/550 mm

Wiper: 115*18 mm / 220*18 mm

Capacitors:

AC110V / capacitor 1.3pF / 450V (15W motor)

AC220V / capacitor 0.33uF / 450V (15W motor)

AC110V / capacitor 2uF / 450V (15W motor)

AC110V / capacitor 1uF / 450V (15W motor)

Troubleshooting

Symptom	To check	Corrective action
Disk does not run	●The power input. ●If the lights on the panel are on. ●(Lights flasher mean pauses) ●If it is possible to switch between modes. ●If it is the problem with electrical impedance.	●Use a multimeter to check the power source. ●Replace if the circuit board is burnt. ●Replace a motor. ●110V motor's impedance is 0.5KΩ. ●220V motor's impedance is 2.8KΩ
Disk runs reversely	●If the voltage is sufficient. ●If the capacitor is well plugged-in. ●If it is the problem with electrical impedance.	●Replace a capacitor. ●Replace a motor or a circuit board.
Disk is not stable	●If the wipers are too firmly turned.	●Try to loose the screws a little.
Difficult to collect oil	●If coagulation blocks the disk.	●Clean the coolant. ●Use another brand of cutting fluid?
Unable to separate water & oil	●If the water-oil separating tank is cleaned monthly. ●If the water-oil separating tank is balance.	●Clean the water-oil separating tank.

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油水分離機(圓盤式)

1.0 簡介

1.1 產品特性:

1. 全罩式設計. 防塵、防汙。
2. 一體式底座易安裝
3. 定時器設計. 觸控按鍵模式選擇. 內部電路保護FUSE 1A
4. 可調式油水分離盒
5. CE認證及中華民國專利(M317283)

1.2 產品規格

DG-220TS		DG-260TSL	
盤徑	220mm	盤徑	260mm
安裝平面下吃水深	130mm	安裝平面下吃水深	140mm
安裝後尺寸 (長*寬*高)	330*200*120 (L*W*H)	安裝後尺寸 (長*寬*高)	390*250*150 (L*W*H)
電壓	AC110V/AC220V	電壓	AC110V/AC220V
馬力	15W	馬力	15W
效能	8L / 小時	效能	10L / 小時
D300		DG-310TSL	
盤徑	300mm	盤徑	310mm
安裝平面下吃水深	95mm	安裝平面下吃水深	170mm
安裝後尺寸 (長*寬*高)	470*240*180 (L*W*H)	安裝後尺寸 (長*寬*高)	430*240*150 (L*W*H)
電壓	AC110V/AC220V	電壓	AC110V/AC220V
馬力	25W	馬力	15W
效能	12L / 小時	效能	12L / 小時
DG-400TSL		DG-550TBL	
盤徑	400mm	盤徑	550mm
安裝平面下吃水深	210mm	安裝平面下吃水深	290mm
安裝後尺寸 (長*寬*高)	540*234*198 (L*W*H)	安裝後尺寸 (長*寬*高)	530*240*295 (L*W*H)
電壓	AC110V/AC220V	電壓	AC110V/AC220V
馬力	15W	馬力	25W
效能	15L / 小時	效能	20L / 小時

1.3 配件

配件/型號	DG-220TS	DG-260TSL	D-300	DG-310TSL	DG-400TSL	DG-500TBL
油水分離盒	●	●	●	●	●	NA
蓄油盒	●	●	NA	●	●	●
計時器	●	●	NA	●	●	●

D300油水分離盒尺寸:長320mm*寬120mm*高215mm

2.0 安裝說明

為達成油水分離機使用之效能, 操作油水分離機前, 請遵照下說明及步驟循序安裝:

- 2.1 參考以下兩張圖面: 請見附件(水箱蓋開孔尺寸)如所示, 切割水箱蓋鋁金, 使油水分離機圓盤得以置入。
- 2.2 油水分離機務必安裝並固定於水箱上。

A. 安裝程序

步驟1: 於水箱蓋圖A處安裝油水分離機(圖2.2.A)

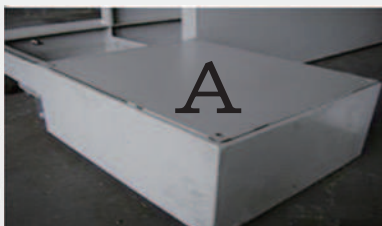


圖2.2.A



圖2.2.B

步驟2: 使用電鋸在水箱蓋上切割開孔, 如上圖2.2B。開孔大小依不同型號的油水分離機而有不同, 尺寸如下圖2.2.C。

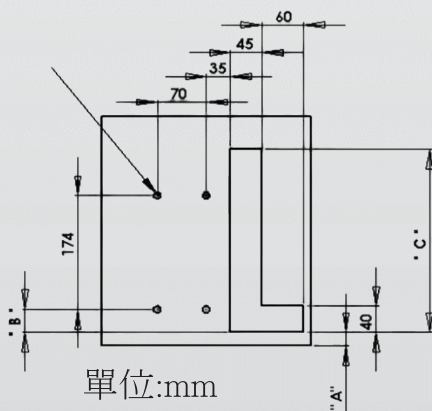


圖2.2.C & 水箱開孔尺寸圖

Unit: mm

DG220TS: 尺寸A: 15mm

B: 15mm

C: 250mm

DG260TSL: 尺寸A: 20mm以上

B: 35mm

C: 280mm

DG310TSL: 尺寸A: 40mm以上

B: 60mm

C: 330mm

DG400TSL: 尺寸A: 60mm以上

B: 100mm

C: 420mm

步驟3: 安裝油水分離機並將之固定(如圖2. 2. D)



圖2. 2. D

B. 安裝完成後如下圖2. 2. E/2. 2. F

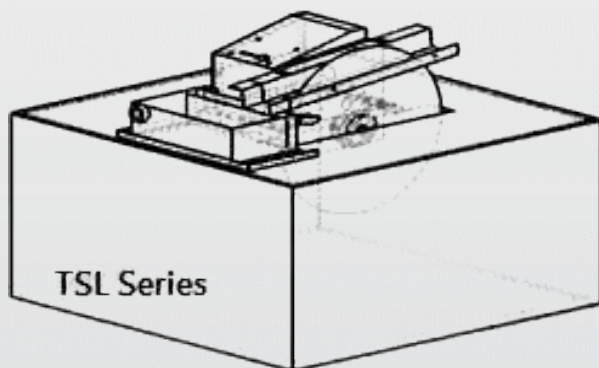


圖2. 2. E TSL系列之安裝示意區

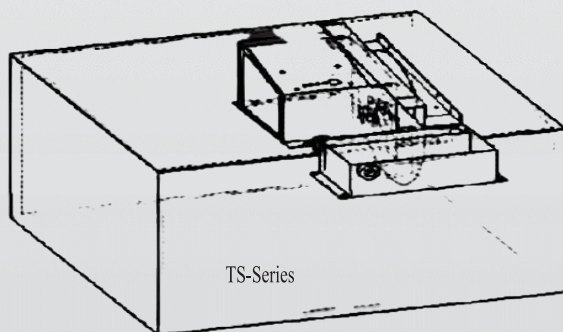


圖2. 2. F TS系列之安裝示意圖

3.0 電控

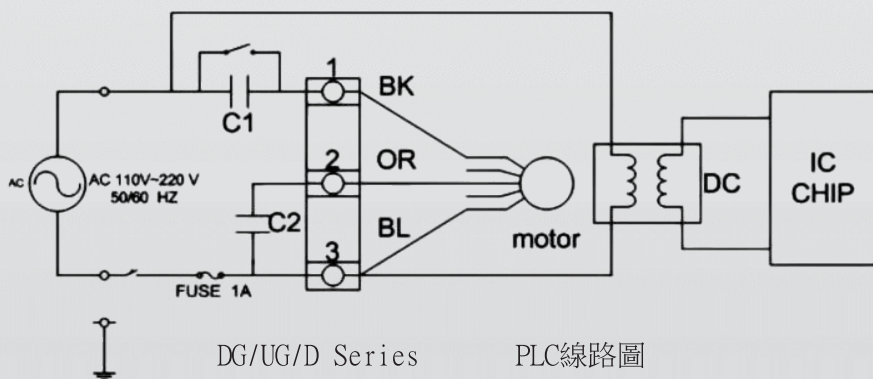
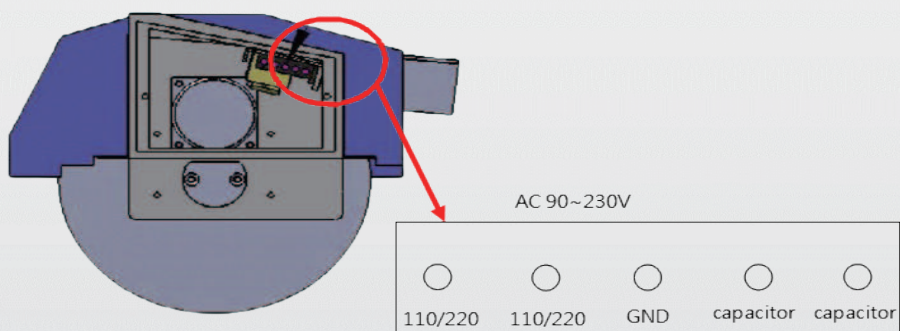
3.1 在連接電源前，請必確認電壓與油水分離機上註明之電壓相符。

3.2 為遵循電控安全規範，電源供應以AC110V/220V單向電壓為限。

3.3 將電源線(AC110V/AC220V 1phase)接於端子台端子台
由左至右分別為:(110/110/接地/電容/電容)或(220/220/
接地/電/電容)。(如下圖示)

電容器規格:AC110V用電(1.2MF/450VAC)

AC220V用電(0.33F/450VAC)



4.0 操作說明

4.1 觸控式按鍵面板說明如下圖(圖4.1.A)

1. 當接上電源時, MODE(模式鍵亮, 表示此時正在運轉。若要停止時請按MODE(模式鍵)1~3次直至OFF亮, 即停止運轉。
2. MODE(模式鍵)可選擇油水分離機運轉時間(有3種時間模式)。
M1: 表示馬達運轉15鐘後, 停10分鐘, 再繼續運轉。
M2: 表示馬達運轉25分鐘後, 會停10分鐘, 再繼續運轉。
M3: 表示馬達運轉35分鐘後, 會停10分鐘, 再繼續運轉。

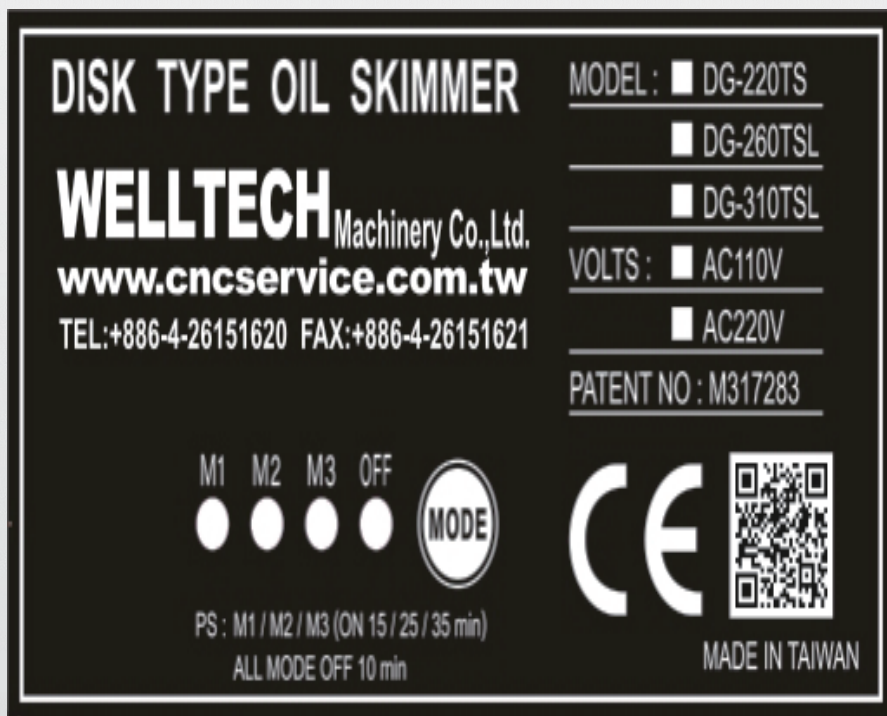


圖4.1.A

5.0 維修/維護

5.1 每週檢視刮油片. 清理刮油片上的油垢。每月清理油水分離盒並於使用前注滿水。

5.2 每半年檢查一次齒輪及馬達。

5.3 相關耗材規格:

DG-系列馬達AC110V~220V/6HZ/功率13~15W//轉速:15RPM
減數比2:1(標準品)及3:1(選配))

D-系列馬達(AC110V~220V/6HZ/功率25W//轉速:1500RPM
減數比180:1)

圓盤:Stainless Ste#430徑 : 220/ 260/ 300/ 310/400/
550 mm

刮油片:115*18mm

6.0 故障排除

異常現象	確認步驟	故障排除
圓盤不動作	1. 檢查電源輸入AC110V/或220V有/無? 2. 通電時面板的MODE燈不亮燈閃爍表示間歇狀態(馬達不轉為正常) 3. MODE燈亮M1/M2/M3會改變但馬達不運轉。 4. MODE燈亮M1/M2/M3會改變但馬達會運轉。	• 電表量測 • 檢查電源, IC電路有無泡水/油汙是否燒毀, 更換IC板 • 檢查齒輪有無卡死或檢查馬達線是否燒毀 • 檢查齒輪是否破裂
圓盤逆轉	1. 檢查電壓是否不足, 需100V或200V以上 2. 檢查電容器有無接妥。	• 電表量測或更換IC板 • 更換電容(AC110V選擇1.2uF) (AC220V選擇0.33M.F)
刮油效果不佳	1. 檢查水箱有無凝固物阻擋圓盤吸取浮油 2. 滑道油對切削液的排水性要強. 效果佳	• 清洗水箱 • 更換切削液試試看
油水分離效果不佳	1. 油水分離盒出水口/出油口之水平不良 2. 檢查油水分離盒是否油汙太多。 3. 油水分離機應該安裝在抽水浦浦入水口前方, 如此油水分離效果加倍。	• 應調整出水口/出油口之水平 • 清洗分離盒後再加滿水 • 安裝位置需正確

皮帶式(鏈網式)油水分離機

Belt (Mesh Belt)Type Oil Skimmer

B-40



型號Type No.	B-4014	B-4021	B-4031	B-4041
電壓Voltage	110V/220V	110V/220V	110V/220V	110V/220V
皮帶寬度Belt Width	40mm	40mm	40mm	40mm
刮油能力Capacity	4L/H	4L/H	4L/H	4L/H
重量Weight	3KG	3KG	3KG	3KG
吃水深Depth	140mm	210mm	310mm	410mm

抽取式油水分離機

Pump Type Oil Skimmer

型號 Type No.	FL-30
電壓 Voltage	110V/220V
功率 Power	1/4HP
容量 Capacity	30L
計時 Timer	1HR reset
尺寸 Dimension	550x350x700mm
重量 Weight	52KG

