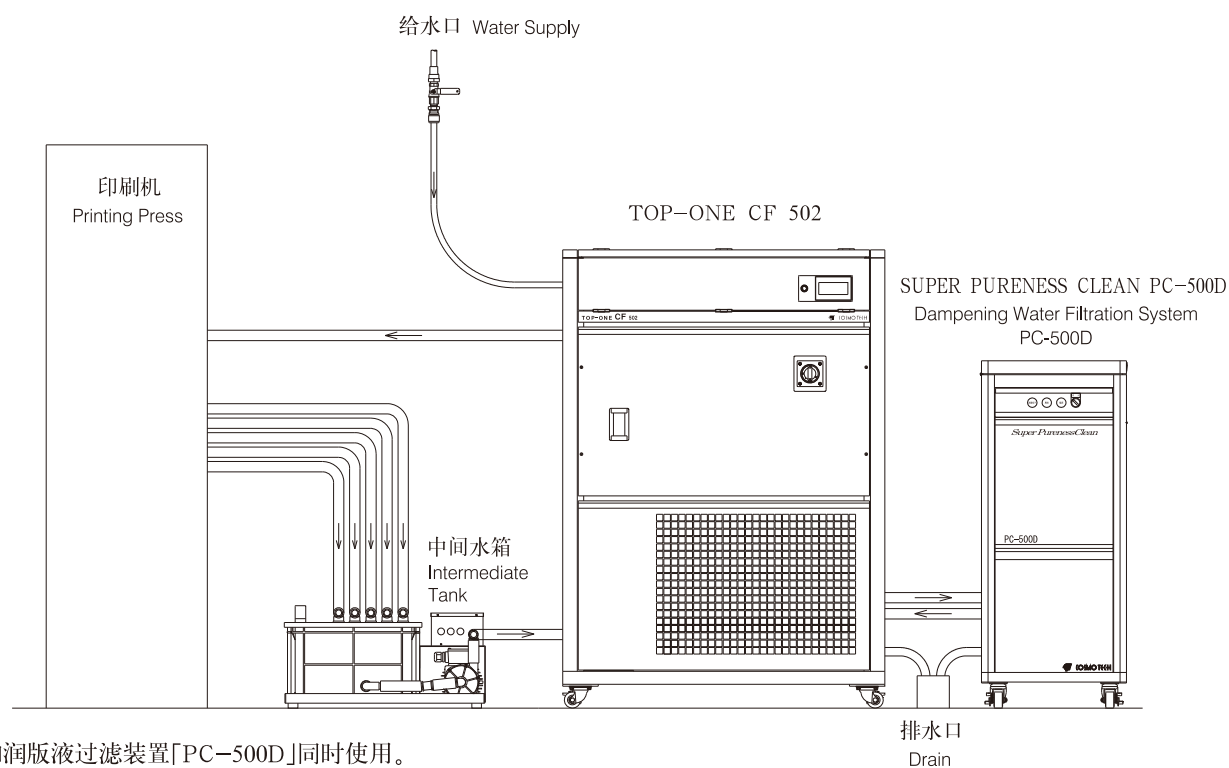


## 系统构成图 System Configuration Diagram



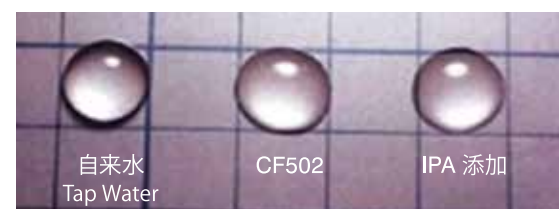
※務必和潤版液過濾裝置「PC-500D」同時使用。  
(注：如果和其他公司裝置的組合，效果我司不予保證。)

\*Filtration system PC-500D needs to be installed to make the system perform effectively.  
(Note: A combination with a filtering system manufactured by other company can't guarantee the effect.)

## 效果·实证 Effect & Experimental Proof

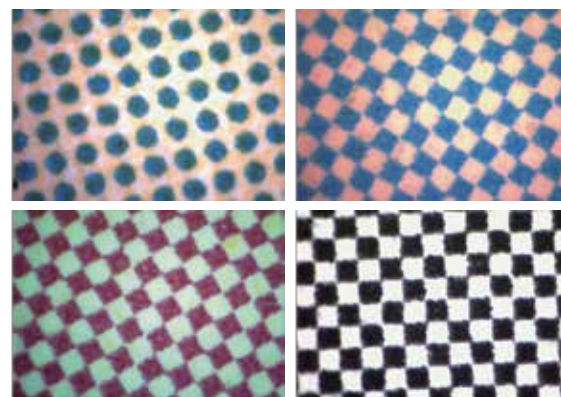
水的表面张力(比较照片) ... 左侧是「自来水」,中间是「CF502」,右侧是「IPA 添加」,由此可见,不使用添加剂也可使其亲水化,降低表面张力。

Surface Tension of Water (Comparative Picture) ... Left "Tap Water" / Middle "CF502" / Right "Addition of IPA"  
Without using additive agent it becomes hydrophilic, and the surface tension is lowered.

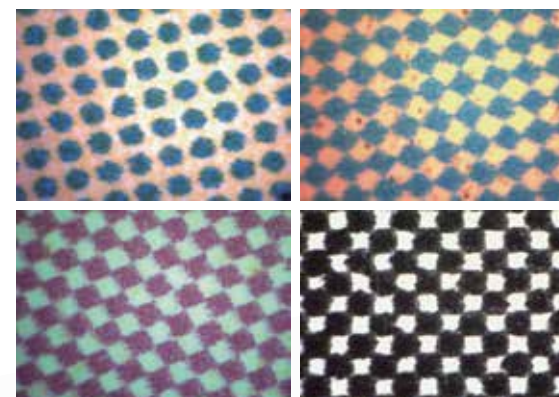


印刷物的网点(比较照片) ... 左面是「CF502」,右面是「IPA 添加」这是同样图案的印刷物扩大 200 倍的对比照片。从强光部到阴影部的再现性得到了显著的提高,提升了印刷品质

Printing Dot (Comparative Picture) ... Left "CF502" / Right "Addition of IPA"  
Photos are magnified the same design 200 times. Image reproducibility from highlight to shadow rises remarkably, and the printing quality improves.



CF502



IPA 添加

## 规格一览 Specifications

名称 Description of Product	无化学添加型 润版液冷却循环装置 Chemical Free Dampening Water Circulation System
形式 Model	TOP-ONE CF502
机器构成 Configuration	光催化装置·冷却水槽以及空冷式冷冻机一体型构成 Photocatalytic Apparatus, Cooling Water Tank and Air-cooled Refrigerator
设定以及异常表示 Setting and Error Display	在触摸屏上设定以及统一进行异常表示 Batch Display by a Touch Panel
电源 Power Supply	3相200V 50/60Hz 3-phase 200V 50/60Hz
运转电流 / 容量 Electric Capacity / Current	5.9KVA / 16.8A
水槽容量 Tank Capacity	约135L(定量100L) Approx. 135L (Fixed Quantity 100L)
冷冻机输出 Refrigerator Output	1.99KW
冷冻机能力 Cooling Capacity	6.1 / 7.3KW
冷媒 Refrigerant	R407C
送水泵 Water Pump	180 / 250W 50L/min(扬程4m) / 80L/min(扬程4m) 180 / 250W 50L/min (Pump Head 4m) / 80L/min (Pump Head 4m)
光催化循环泵 Circulating Pump	170 / 265W
给水方式 Water Supply Method	自动给水(直接连接自来水) Automatic (Water Tap Direct Connection)
H液管理 Etch Solution Control	隔膜泵定量稀释 Fixed Quantity Dilution by a Bellows Pump
外形尺寸(W × D × H) Dimensions (W × D × H)	1000 × 782 × 1424mm
制品重量 Weight	约300Kg(运转时重量:约400Kg) Approx. 300kg (In Operation: Approx. 400kg)
适应印刷机 Applicable Press	8色四开机(26/28in) ~ 4色大对开(44in)以下 26" 8 Color ~ 44" 4 Color or Less

产品的规格·外观变更时不予事先通知。  
Specification may be changed without notice.



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Registered establishment: Cosmotech Co., Ltd. headquarters and Kyoto Factory.  
Registered coverage: Design, development, manufacturing, sales, installation and maintenance of peripheral equipments for printing and book binding. Equipments certified according to ISO 9001 are fountain solution refrigerating circulator, roller chiller, powder spray system, fountain solution filtration system and double sheet detector.

Distributor

**NEW**

环境保护印刷 无化学添加推荐产品  
Eco-friendly Offset Print

无化学添加型 润版液冷却循环装置  
Chemical Free Dampening Water Circulation System

# TOP-ONE CF502

(光催化专利: 第4246256号)  
(Photocatalyst Patent: #4246256)

至今为止未有的划时代系统登场!  
环境保护印刷的决定版。

Innovative Product!!  
Eco-friendly Offset Print Super Technology

由于内部配备光催化反应装置,使润版液活性化,因此不需要使用以前的药品类,就可以完成高品质的印刷。

Photocatalytic reaction device is built-in and it activates dampening water.  
High-quality print is possible without using conventional chemical.



COSMOTECH 是创造理想印刷环境的印刷周边机器的制造厂商  
COSMOTECH is manufacturer which leads to create ideal printing factory environment.  
◎取得ISO9001认证 Certified ISO9001

# 强力支援「环境保护印刷」

We support "Eco-friendly Offset Print".

## TOP-ONE CF502

CF...(Chemical Free)

由于过滤掉自来水中的钙Ca, 镁Mg, 使表面张力降低, 润版液中不需要使用以前的药品类, 只用自来水就可以完成比以前更高质量的印刷。(根据印刷环境条件不同)

光催化水处理单元和水质磁性处理单元的组合, 加上融合了COSMOTECH 多年制造润版液冷却循环装置的技术经验, 完成了最终的无化学添加系统。CF502强力支援「环境保护印刷」。

This system removes calcium and magnesium from tap water, and significantly reduces its surface tension. You get a better print quality at lower cost, since no conventional chemical but only tap water is needed. (Condition differs from printing environment.) Ultimate chemical free system was completed by integrating the combination of photocatalytic water processing unit and magnetic water processing unit, and Cosmotech's manufacturing technology of dampening solution circulation system. TOP-ONE CF502 contributes "eco-friendly offset print".



### 特长 Features

- ◆ 不需要使用以前必须的润版液药品类。
- ◆ 减少废液量, 做对环境友善的印刷工厂。
- ◆ 印刷时的水量控制到最小量, 提高了油墨展开面积。
- ◆ 不会对 CTP 版和串墨辊类造成损伤。
- ◆ 不使用药品, 可以直接排放到下水道。  
(请有关部门进行成分分析后再排放到下水道)
- ◆ No conventional chemicals required for dampening water.
- ◆ Waste liquid is reduced and be an eco-friendly printer.
- ◆ The ink mileage improves because minimum water is used for print.
- ◆ No damage to CTP plates and rollers.
- ◆ Sewage drainage is possible since chemical isn't contained. (Confirmation by an ingredient analysis is necessary for sewage drainage.)

### 无化学添加系统 Chemical free system

#### 光催化水处理单元 Photocatalytic Water Processing Unit

在二氧化钛和紫外线 UV 灯的作用下进行光催化反应, 减少水中的溶解氧, 降低水的氧化还原电位。这种被还原的水利用其特有的催化降解功能, 可分解水中的有毒物质, 有效杀灭多种细菌, 并将细菌或真菌释放出的毒素分解及无害化处理。同时因为降低了表面张力从而提高了 PS 版的亲水性空白部分的渗透力。提高了油墨开展面积, 因为不含有化学药剂, 所以即使润版液和油墨混合也不会发生化学反应, 以及因颜色引起的不均匀膜厚现象。可以使润版液和油墨保持平衡, 从而实现了用少量的润版液·和少量的油墨就可以完成比以前更高的印刷浓度。

By using photocatalytic reaction by oxidation titanium and a UV lamp, dissolved oxygen in the water is reduced and the oxidation-reduction potential of water is lowered. This regenerated water is expected "decomposition of dirt", "antibacterial activity", "antiseptic property" and "harmful substance removal". Also, osmotic strength to hydrophilic non-image part of PS plate becomes high by a decline of the surface tension. Even if ink mixes with dampening water, because chemical isn't contained, chemical reaction isn't initiated and a phenomenon of variation in ink thickness by color doesn't occur. By this, it is possible to maintain the most suitable balance of dampening water and ink, and higher quality of print can be achieved by small amount of dampening water and ink.

#### 水质磁性处理单元 Magnetic Water Processing Unit

磁性处理单元是把水中的红锈和不纯物质污泥化(淤渣化), 使其沉淀到水箱底部的效果。防止循环系各部(水管系, 循环水箱, 印刷机上)附着水垢以及不纯物, 并且可以逐渐洗掉已经沉积在循环系统内的污染物。另外, 和我司推荐的润版液过滤装置「SUPER PURENESS CLEAN」一起使用, 可以更有效地保持润版液清洁, 延长润版液的交换时间。同时, 有把水粒子细分化(1/13)的效果, 在与光触媒的协同效应下表面张力降低, 增强版面的渗透力。

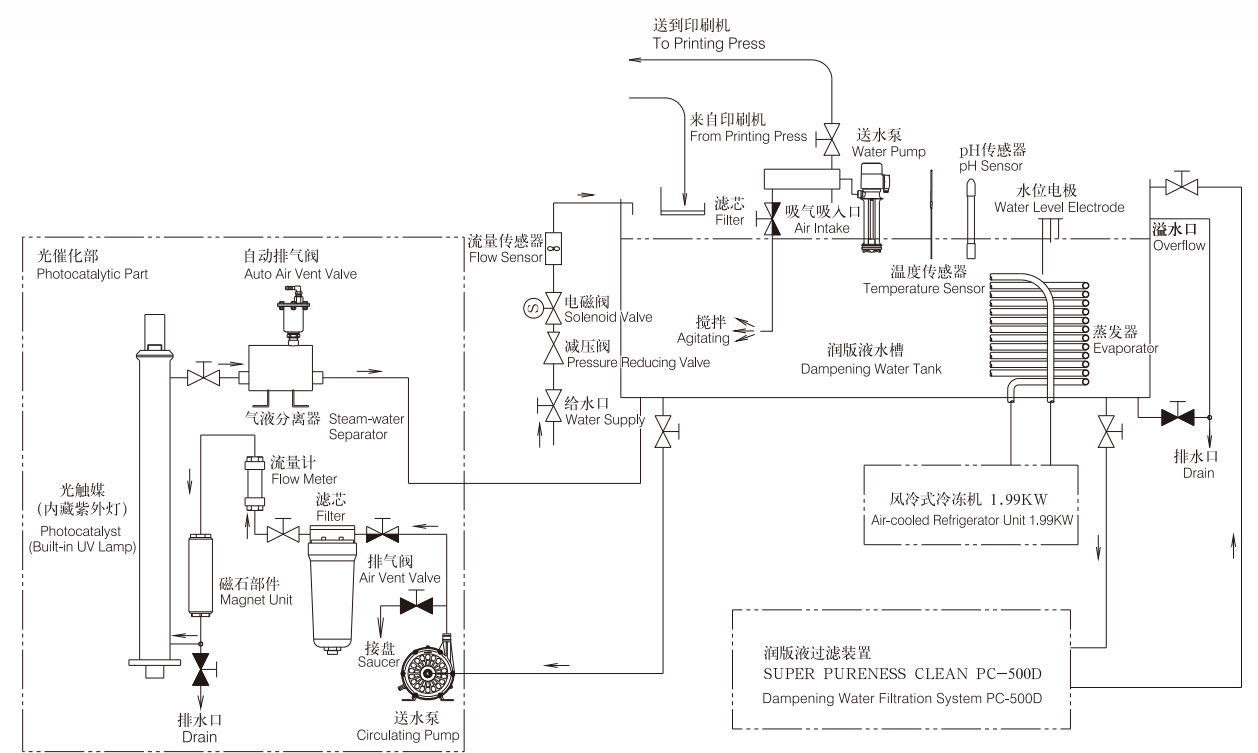
Magnetic water processing unit has the effect of settling red rust and impurities in the water down to the tank lower part. So it prevents scale and dirt from accumulating on the circulation system (piping system, circulation tank, printing press). TOP-ONE ECO CF502 removes residue deposited already in the printing system little by little. The endurance of the longer effect can be expected by installing a dampening water filtering system PC-500D. Also, it has the effect of subdivision of water particle (1/13). By synergistic effect with photocatalyst, surface tension falls and ability to penetrate increases.

### 光催化作用下的润版液过滤图象

Image of Dampening Water Filtration by Photocatalyst



### 系统流程图 System Flow Chart



※务必和润版液过滤装置「PC-500D」同时使用。  
(注·如果和其他公司装置的组合, 效果我司不予保证。)  
\*Filtration system PC-500D needs to be installed to make the system perform effectively.  
(Note: A combination with a filtering system manufactured by other company can't guarantee the effect.)

### 成本效益 Cost Performance

5色对开机(40in) 白天运转的试算 (A公司的实例)	1个月的运转天数: 25天 1年的运转天数: 300天	IPA: 3000日元/桶 H液: 16,500日元/桶 废液处理费用: 90日元/L
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采用前	IPA使用量	18L×1桶/天 → 12.5桶/月 1桶3,000日元×12.5=37,500日元/月	450,000日元/年
	H液使用量	20L×4桶/月 1桶16,500日元×4=66,000日元/月	792,000日元/年
	废液处理费用	150L×4次(每周交换一次) 600L/月 废液处理费用90日元/L×600=54,000日元/月	648,000日元/年
<b>TOTAL</b>			<b>450,000+792,000+648,000=1,890,000日元/年</b>

采用后 可以大幅度削减这些药剂和废液处理的费用。(满足各种条件的情况)  
可以说其经济效益是极大的。

40" 5 color press	Day shift operation	Days of operation for 1 month: 25 days Days of operation for 1 year: 300 days	IPA: JPY3,000/ can Etch solution: JPY16,500/ can Industrial waste disposal rate: JPY90/ liter
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Before Installation	Usage of IPA	18 liter x 1 can/ day → 12.5 cans/ month 1 can JPY3,000 x 12.5 = JPY37,500/ month	JPY450,000/ year
	Usage of Etch solution	20 liter x 4 cans/ month 1 can JPY16,500 x 4 = JPY66,000/ month	JPY792,000/ year
	Amount of waste liquid	150 liter x 4 times (Water exchange once a week) → 600 liter/ month Industrial waste disposal cost JPY90/ liter x 600 = JPY54,000/ month	JPY648,000/ year
<b>Total</b>			<b>450,000 + 792,000 + 648,000 = JPY1,890,000/ year</b>

After Installation Cost of chemical and industrial waste disposal cost can be reduced substantially.  
(When certain conditions are reached)

### 外形尺寸图 External Dimensions

