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台灣台中市西屯區工業區12路8號
NO.8, 12TH ROAD, INDUSTRIAL PARK, TAICHUNG, TAIWAN, R.O.C.
TEL: + 886-4-23593717 FAX: + 886-4-23590920
E-mail: jsedm@ms11.hinet.net http://www.jsedm.com
SKYPE: jsedmtw

線上服務

SKYPE : jsedm-service
E-MAIL : jsedm.service@msa.hinet.net

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健陞機電工業股份有限公司 JIANN SHENG MACHINERY & ELECTRIC INDUSTRIAL CO.,LTD.



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MAIN BUSINESS 主營業務 >>>

- 雙向往復循環式液體拋光機
Two Way Circulating Fluid Polishing Machine
- 單向自動循環式液體拋光機
One Way Automatic Circulating Fluid Polishing Machine
- 微細孔磨粒液體拋光機
Micro Hole Abrasive Flow Polishing Machine
- 懸浮磨料去毛刺機
Suspended Abrasive De-burring Machine
- 高速噴射拋光機
High Speed Jet Polishing Machine
- 熱能去毛刺
Thermal De-burring
- 光整研磨機
Finishing Mill



專注態度，成就專業品質
團結協作，才能共創未來

Focus On The Attitude, Professional Quality
Unity Cooperation, To Create A Better Future

POLYMER ELASTIC SOFT ABRASIVE 高分子彈性軟磨料 >>>

1. 此高分子彈性軟磨料、微細孔高分子油性磨料及高分子懸浮水性磨料等採用特殊高分子彈性材料結合磨介質進行鏈接產生高分子結構的彈性軟磨料，具有柔韌性大（猶如橡皮泥一樣的性能），擴張膨脹性強、對磨介質粘附力強，有助於磨削加工效率提高。
2. 此軟磨料對材質要求不是很高，處理一些高低硬度鋼、各種合金鋼、銅、鋁、非金屬材料陶瓷、玻璃等工件內孔或外表面尤其有效。

1. The polymer elastic soft abrasive, micro pore oily abrasive and suspended abrasives are all special high-density molecular polymer elastic materials used for a combination of grinding applications. The Polymer structure of these elastic soft abrasives has strong expansion ability, strong adhesion to the grinding medium and helps to improve grinding efficiency.
2. The soft abrasive can work with high and low hardness tungsten steel, alloy steel, copper, aluminium, nonmetal materials such as ceramics, glass, especially effective for inner hole or outside surfaces.



白剛玉軟磨料



綠色碳化矽軟磨料



立方碳化矽軟磨料



黑色碳化矽軟磨料



高分子鑽石軟磨料

PURPOSE 用途 >>>

- SDC鑽石軟磨料（顯微硬度約10000kg/mm²）
SDC Diamond Soft Abrasive (Micro Hardness Of About 10000kg/mm²)
- CBN鑽石軟磨料（顯微硬度約7200kg/mm²）
CBN Diamond Soft Abrasive (Micro Hardness Of About 7200kg/mm²)
- 碳化硼軟磨料（顯微硬度約4500kg/mm²）
Boron Carbide Soft Abrasive (Micro Hardness Of About 4500kg/mm²)
- 綠色碳化矽軟磨料（顯微硬度約3320kg/mm²）
Green Silicon E Soft Abrasive (Micro Hardness Of About 3320kg/mm²)
- 黑色碳化矽軟磨料（顯微硬度約2840kg/mm²）
Black Silicon Soft Abrasive (Micro Hardness Of About 2840kg/mm²)
- 棕/白剛玉軟磨料（顯微硬度約2000kg/mm²）
Brown And White Corundum Soft Abrasive (Micro Hardness Of About 2000kg/mm²)
- 油/水性液體磨料（顯微硬度根據工件材質配置）
Oil/Water Liquid Abrasive (Micro hardness According To Workpiece Material Configuration)
- Silicon Carbide 碳化矽 - (S) 最常用因為其是一種堅硬、耐用和價格適度的材料。
The most popular abrasive which is hard, durable and competitive on price

- Aluminium Oxide 氧化鋁 - (A)
用在需要精性研磨的時候，比如精加工中空高硬度耐熱、不銹鋼飛機引擎葉片和導向葉片。
We add inert material(aluminum oxide) into the abrasive, when we polish high-nickel, heat-resistant materials, eg. stainless steel airplane engine blades
- Boron Carbide 碳化硼 - (B)
比金屬砂更堅硬並且去除材料的速度更快，它用於不易加工的材料，比如當用碳化矽去除材料太慢或磨損太快的情況下，硬工鋼、鉻鋼主要含鎢的耐熱不銹鋼。It is harder than silicon carbide, use it when polishing speed with silicon carbide media is too slow, eg. when polish hardened tool steel, cobalt steel, or stainless steel containing Nickel.
- Diamond Powder 鑽石粉 - (D)
用於特殊情況，例如鉻鋼等硬質合金工件。
It is especially for hard alloy materials like tungsten steel.

PARTICLE SIZE SERIES 粒度系列 >>>

粒度是研磨介質內硬質顆粒的大小，由粗到細所用的粒度（泰勒篩號）為：
The particle size of the hard medium, is measured by the Taylor sieve system:

顆粒度 (目) Particle size (mesh)	46	60	80	120	180	w20	w10	w3.5	w0.5
顆粒 (目) Particle (mesh)	422-355	320-250	212-180	125-106	90-63	20-14	10-7	3.5	0.5

備註
Remarks

粒度選用需考慮的因素有三個：
第一是加工工件的通過縫隙的最小間隙，一般所選顆粒，尺寸應小於縫隙的1/5；
第二是磨削效率，粒度大則效率高；
第三是被磨削的表面粗糙度，顆粒越粗，則研削度的粗糙度越大。
There are three factors that need to be considered in grain size selection:
The first is the minimum gap of the processed parts. Size should be less than the section gap 1/5;
Second is the grinding efficiency, large size, high efficiency;
Third is the surface roughness of the grinding surface, the more coarse particles, The greater the grinding surface roughness;



TWO WAY CIRCULATING FLUID POLISHING MACHINE

雙向往復循環式流體拋光機 工作原理介紹 >>>

本技術利用上下油壓缸體運動擠壓的方式，使軟磨料流經加工面、內孔或溝角，進行去毛刺、倒角、及拋光研磨的加工；並以往復運動來進行鏡面加工。此種加工方式對於凹凸面與彎曲孔道等通常刀具達不到的複雜形狀，是最適合的加工方法，特別是在氣體、液體類流體的導通管內進行鏡面拋光，使研痕和流體通過方向一致，有效的提高模具或工件的性能、質量、光潔度能達到鏡面等級，同時延長模具及工件的使用壽命，加工後表面粗糙度可達 Ra0.025~Ra0.01 μm。

The machine equipped with a hydraulic cylinder, pumps the abrasive fluid up and down through the part to be processed to achieve polishing on the surface through an inner hole, burring and chamfering. A mirror surf is achieved by the circulating polishing fluid and is especially suitable for concave and convex surfaces and complex curved channels. Most suitable for gas and liquid fluid conduction tube. The method effectively improves the performance of the die or workpiece and achieves a bright and clean surface, the processed surface roughness can reach Ra0.025 ~ Ra0.01 microns.



Machine Size 主機外形尺寸

型號 Model	高 Height	寬 Width	深度 Depth	重量 Weight	備註 Remarks
SMKS-B500	2305 mm	1200 mm	1000 mm	1.5 T	具體參數依實物為準 Specific parameters based on the actual product
SMKS-B600	2350 mm	1300 mm	1200 mm	1.75 T	
SMKS-B800	2550 mm	3200 mm	1400 mm	2.5 T	
SMKS-1050	2600 mm	3500 mm	1500 mm	3.5 T	
SMKS-1300	2600 mm	4500 mm	2000 mm	4.5 T	

• 規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

Working Table, Fixture, Grinding Diameter 工作台、夾具、研磨直徑

型號 Model	工作台高度 Table height	夾具操作高度 Fixture operation height	夾具操作寬度 Clamp operation width	研磨缸體截面直徑 (介質缸直徑) Grinding medium cylinder tank diameter	單次加註磨料 Capacity of grinding medium tank
SMKS-B500	1050 mm	260 mm	500 mm	φ102 mm	3 KG
SMKS-B600	1080 mm	380 mm	700 mm	φ152 mm	8 KG
SMKS-B800	1150 mm	310 mm	800 mm	φ252 mm	25 KG
SMKS-1050	1150 mm	450 mm	850 mm	φ352 mm	45 KG
SMKS-1300	1150 mm	650 mm	1050 mm	φ552 mm	90 KG

• 規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

Other Parameters 其他參數

型號 Model	操作面板 Operation Panel	電路控制 Control circuit	加工壓力 (可調) Processing pressure (adjustable)	電機功率 Motor power	電壓 Machine voltage
SMKS-B500	Touch screen	PLC	1~14 Mpa	3 HP	380/3 PH
SMKS-B600	Touch screen	PLC	1~14 Mpa	5 HP	380/3 PH
SMKS-B800	Touch screen	PLC	1~18 Mpa	10 HP	380/3 PH
SMKS-1050	Touch screen	PLC	1~18 Mpa	15 HP	380/3 PH
SMKS-1300	Touch screen	PLC	1~22 Mpa	20 HP	380/3 PH

• 規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

ONE WAY AUTOMATIC CIRCULATING FLUID POLISHING MACHINE

單向自動循環式流體拋光機 工作原理介紹 >>>

本技術是對塑膠模具、熱嘴、熱流道、長管、彎管等不規則工件開發的一款新型流體拋光設備！可PLC計算機控制達到自動、經濟、高效拋光的結果，其拋光痕跡和工件使用的方向一致，因此具有同方向規格性加工特點，此種加工方式，對於凹凸面與彎曲孔道、多孔、細孔、長孔等通常刀具達不到的複雜形狀，是最適合的加工工藝。

我公司為了滿足客戶需求，根據客戶產品要求訂製單向磨粒流體拋光機及相關服務，也可為有需求的企業或個人提供熱流道系統代加工服務和腔體以及微孔修復服務，另外有以下需求的均可聯繫我，對微孔、多孔、長孔、彎孔、異形孔的工件內部拋光去毛刺等，廠產品在幾分鐘內提高3個精度級別，表面粗糙度可達 Ra<0.01 μm。

The technology of the one way AFM is designed for plastic injection moulds, hot nozzle, hot runner, long tube and bent pipe products. The PLC can control the polishing automatically to economically improve the polishing effects

This process is suitable for concave and convex surfaces, curved channels, irregular shape and micro holes and can meet any other complex shapes.

In order to meet customer demand we are not only providing the abrasive flow machines, but also provide services for customers who need polishing of hot runner systems, we can decrease the roughness in a few minutes and achieve a level of Ra < 0.01 microns.



Machine Size 主機外形尺寸

型號 Model	高 Height	寬 Width	深度 Depth	重量 Weight	備註 Remarks
SMKS-B601	2300 mm	1250 mm	1200 mm	1.5 T	具體參數依實物為準 Specific parameters based on the actual product
SMKS-B701	2350 mm	1350 mm	1200 mm	1.8 T	
SMKS-B801	2500 mm	3000 mm	1300 mm	2.3 T	
SMKS-1051	2650 mm	3500 mm	2350 mm	2.8 T	
SMKS-1301	2650 mm	4000 mm	2350 mm	3.6 T	

• 規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

Working Table, Fixture, Grinding Diameter 工作台、夾具、研磨直徑

型號 Model	工作台高度 Table height	夾具操作高度 Fixture operation height	夾具操作寬度 Clamp operation width	研磨缸體截面直徑 (介質缸直徑) Grinding medium cylinder tank diameter	單次加註磨料 Capacity of grinding medium tank
SMKS-B601	根據產品需求配備專用操作步台及操作工位台 specific parameters according to the material According to the product demand is equipped with special step operating platform and operation platform	具體參數依實物為準	具體參數依實物為準	φ152 mm	10 KG
SMKS-B701				φ202 mm	20 KG
SMKS-B801				φ252 mm	50 KG
SMKS-1051				φ352 mm	90 KG
SMKS-1301				φ552 mm	150 KG

• 規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

Other Parameters 其他參數

型號 Model	操作面板 Operation Panel	電路控制 Control circuit	加工壓力 (可調) Processing pressure (adjustable)	電機功率 Motor power	電壓 Machine voltage
SMKS-B601	Touch screen	PLC	1~14 Mpa	3 HP	380/3PH
SMKS-B701	Touch screen	PLC	1~14 Mpa	5 HP	380/3PH
SMKS-B801	Touch screen	PLC	1~18 Mpa	10 HP	380/3PH
SMKS-1051	Touch screen	PLC	1~18 Mpa	15 HP	380/3PH
SMKS-1301	Touch screen	PLC	1~22 Mpa	20 HP	380/3PH

• 規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

MICRO HOLE ABRASIVE FLOW POLISHING MACHINE

微細孔磨粒流體拋光機 工作原理介紹 >>>

微細孔磨粒流體拋光原理實際上與我們的單向磨粒流體拋光機加工過程相似，主要差別是微細孔磨粒流體拋光機是使用一種低粘度媒介和更小的研磨粒子，磨料更細，流動性更強，有足夠的粘度保持加工的一致性，並且保持研磨效果的均勻分布，這樣磨料可以流過小孔或者微孔去除微小毛刺，改善壓力腔與小孔內壁的表面質量。此款式磨粒流體拋光機專為燃料油霧噴頭噴嘴、油壓薄片閥體開發。該工藝可以改善燃料霧化，改善發動機性能，並且降低排放物。

The principal of the Micro hole abrasive flow is similar to the one-way abrasive flow polishing process, the main difference is that micro hole abrasive polishing machine uses a low viscosity fluid medium and smaller abrasive particles, lighter liquid keeps the consistency of the viscosity and keep the grinding effect uniformly distributed.

The abrasives can flow through the holes or pores to remove tiny burrs, improving surface quality of the pressure cavity. This style of abrasive flow polishing machine is designed for fuel or oil mist nozzles sprinker nozzles and hydraulic valves. The process can improve the fuel atomization, improve engine performance, and reduce emissions.



Machine Size 主機外形尺寸

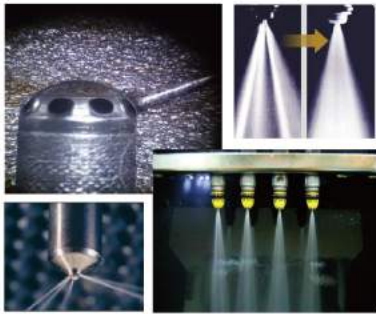
型號 Model	高 Height	寬 Width	深度 Depth	重量 Weight	備註 Remarks
SMKS-602	2300 mm	800 mm	1800 mm	1.5 T	一工位
SMKS-802	2300 mm	1200 mm	1900 mm	2.1 T	二工位
SMKS-1002	2300 mm	1800 mm	2000 mm	2.6 T	三工位

規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

Main Engine Size 工作台、夾具尺寸

型號 Model	工作台高度 Table height	工作台寬度 Table width	磨料缸容積 Abrasive cylinder volume	備註 Remarks
SMKS-602	1000 mm	400 mm	10.0 inch/liter	具體參數依實物為準 specific parameters according to the material
SMKS-802	1000 mm	450 mm	18.0 inch/liter	
SMKS-1002	1000 mm	500 mm	26.0 inch/liter	

規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements



微細孔磨粒流體拋光機在噴油嘴行業獨樹一幟，它根據壓力、磨料粘度、磨料溫度等參數之間的關係，進行複雜的程序運算得到。

在加工噴油嘴時，你只要設定好相應的數值，當它達到設定參數時，機器自動停止加工，加工時間在10S-20S之間，流量散差可以控制在正負0.1%之間。隨後再與流量測量儀器、高壓清洗設備配套，這些設備可以根據客戶要求配套一個工位或是多個工位。

Micro hole abrasive flow polishing machine is unique in the fuel injection nozzle industry. It is based on the relationship between the pressure, the viscosity of the abrasive, the abrasive temperature and other parameters.

In the process of fuel injection nozzle, as long as you set the appropriate value, when it reaches the set parameters, the machine automatically stops processing, processing time is between 10S-20S, flow dispersion can be controlled between plus or minus 0.1%.

SUSPENDED ABRASIVE DE-BURRING MACHINE

懸浮磨料去毛刺機 工作原理介紹 >>>

懸浮磨料去毛刺是一種先進的去毛刺技術，利用液體與特殊磨料混合而成，經過增壓系統後液體增加了對工件毛刺的衝擊力，通過特殊磨料粒子的高速碰撞剪切作用達到磨削去除毛刺，通過PLC控制磨料噴射時的壓力、角度及噴射時間等工藝參數來定量修正工件表面粗糙度的拋光加工工藝。從而達到拋光去毛刺的效果，且不會在工件上有磨料殘留，它是一種全新的液態懸浮水磨料去毛刺技術。

常用的磨料有氧化鋁系、碳化物系、高硬磨料系及軟磨料系等四類。不同種類的磨料，其拋光效果是不同的，各有其適用範圍。拋光時，首先應選擇比工件材料硬度高的磨料種類，這樣才能切入被加工物體內，使硬度的物體表面受到切削加工。其次，要保證磨料粒子在磨削液中保持一定的化學穩定性，以免在加工過程中，與其它物質起化學反應。在一定範圍內，拋光液中懸浮的磨料濃度越高，單位時間內與工件表面單位面積發生碰撞的磨料粒子就越多，材料去除率相應提高，為提高磨料的濃度，可在拋光液中加入一定比例的助懸浮劑，以便懸浮更多的磨料粒子。在拋光金屬材料時，可再加入少量的防銹劑。



Machine Size 主機外形尺寸

型號 Model	高 Height	寬 Width	深度 Depth	重量 Weight	備註 Remarks
SMKS-XF608	2200 mm	1800 mm	1500 mm	1.8 T	具體參數依實物為準 specific parameters according to the material
SMKS-XF808	2400 mm	2000 mm	1500 mm	2.2 T	

規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements

Other Parameters 其他參數

型號 Model	操作面板 Operation panel	電路控制 Control circuit	加工壓力 (可調) Processing pressure (adjustable)	流量 (可調) Traffic (adjustable)	電機功率 Motor power
SMKS-XF608	Touch screen	PLC	0~14 Mpa	0~10 M³	25 HP
SMKS-XF808	Touch screen	PLC	0~18 Mpa	0~20 M³	30 HP

規格可以根據客戶產品需求進行定制
Specifications can be customized according to customer's product requirements



Abrasive de-burring is an advanced de-burring technology. The use of pressurised liquid and a special mixture of special high speed abrasive fluid is forced through the fluid system to achieve shear impact. The process parameters such as pressure, angle and injection time are controlled by PLC to control the surface roughness of the workpiece and achieve the effect of polishing and de-burring, the formula will not leave abrasive residue on the workpiece.

Four classes of Commonly used abrasives are oxide, carbide, high and soft abrasive materials. Different types of abrasive the polishing effect is different, each has its scope of application. The material hardness of the polishing particles should be higher than the workpiece material hardness, so as to polish the object to be processed. Secondly, to ensure that the abrasive particles in the grinding fluid maintain a certain degree of chemical stability and to avoid chemical reaction. The higher the abrasive concentration suspended in the polishing solution, the material removal rate is increased accordingly. To increase the concentration a portion of the suspending agent may be added to the polishing solution. A small amount of anti-rust agent can be added to polishing medium.

PRODUCT DISPLAY 產品展示 >>>

▶ Diesel nozzle series (micro hole machine) 柴油噴油嘴系列 (微細孔機專業)



▶ Automotive industry 汽車工業



▶ Aerospace industry 航天航空工業



▶ Injection mold and plastic mold polishing 劑型模具及塑膠模具拋光



▶ Oil blocks and body cross hole de-burring 油路塊及閥體交叉孔去毛刺



PRODUCT DISPLAY 產品展示 >>>

▶ De-burring polishing oil and gas valve bodies 油氣閥體去毛刺拋光



▶ Heat runner chamfering and hot nozzle cavity polishing 熱流道板及熱嘴內腔交叉口倒角拋光



▶ Cold heading mould and die casting mould 冷墩模具及壓鑄模具



▶ Hard alloy, powder metallurgy mold polishing 硬質合金、粉末冶金模具鏡面拋光



▶ Tooth shape polishing and de-burring 齒形拋光去毛刺



PRODUCT DISPLAY 產品展示 >>>

Turbine and impeller series 渦輪及葉輪系列



Pharmaceutical mold 製藥模具



Medical apparatus and instruments 醫療器械



Harmonic gear series 諧波齒輪系列



Textile industry 紡織工業



PRODUCT DISPLAY 產品展示 >>>

Stainless steel tube, 3D printing products and glass mirror polishing 不銹鋼管·3D列印產品及玻璃鏡面拋光



Stainless steel parts and body - polishing, chamfering 不銹鋼零件及圓體-拋光、去毛刺、倒R角



Precision ceramics, optical electronic device 精密陶瓷·電子器件光學拋光



Spinneret hole de-burring and polishing 噴絲板微小孔去毛刺拋光



Multi size hole and edge de-burring and polishing 多孔·多邊去毛刺拋光

