



螺旋式空氣壓縮機

SL-Series

crew
AIR COMPRESSORS



Energy
Saving(VSD)
節能



Environment
Friendly
環保



Quiet
靜音



(本公司另有渦卷式、活塞式、乾燥機、氣動工具專屬型錄，敬請選購)

ISO-9001 / 13485 CE UL SP FDA REACH

公司簡介

COMPANY PROFILE

PUMA 以專業產銷各式空壓機、氣動工具、高壓清洗機、生醫製品、壓力容器、周邊設備及零組件...等產品遍及全球。

「合作產銷、正派經營」是我們堅持的**經營理念**。

1979年將空壓機的“動力”與氣動工具及周邊設備的“應用”相結合，達成完整的空壓系統，而贏得“AIR CENTER – 巨霸空壓”的稱號。

PUMA 在1996年成立營運總部「管理、研發、行銷」三大中心及各生產部門，完成全球供應鏈。以PDM(產品資料管理系統)、SCM(供應鏈管理系統)、GLM(全球運籌管理系統)、CRM(客戶關係管理系統)、ERP(企業資源規劃系統)...等運籌系統的緊密運作，以符合本公司多元化、全方位的**經營策略**。

配合時代潮流及市場的需求，**PUMA** 以智能、節能、環保、低震動、低噪音、高效率、自動控制的「有油、無油及水潤滑」之活塞式、螺旋式、渦卷式空壓機，並提供醫療級/工業級/專業級/通用級/食品/化工...等用途。

Founded in 1969 by Erming Hsiao, **PUMA** has been working continuously with its partners and sponsors internationally and became a multinational company thereafter. **PUMA** sells and produces all type of Air Compressors, Air Tools, Pressure Washer, Medical Equipment, Pressure Vessels, and related accessories / spare parts worldwide. In 1979, we integrated Air Compressors' "Power Source" with Air Tools / Accessories' "Diversified Application", resulted in an integral air system and fulfilled our vision to become the first "AIR CENTER".

PUMA established General Management, Research & Development, Marketing & Sales 3 major centers in H.Q., and production department in 1996 to become the global supply chain. With the effective application of PDM, SCM, GLM, CRM, ERP management systems, we are determined to achieve company's diversified and comprehensive **business strategy**.

Following the market trend and increasing demand of precision-based Industrial Air Compressor, **PUMA** has designed and developed a range of low-vibration, low-noise, high performance and microcomputer controlled, frequency converted (VSD, variable-speed drive) Piston, Screw and Scroll type, Oil Free as well as Oil Lube air compressors application for Medical, Industrial, Professional, General, Food, and Chemical industries.

PUMA 除不斷研發創新外，「好還要更好！」是我們秉持的**品質政策**，管理層面更掌握了核心競爭能力，以高效率及差異化的企業運籌策略，達到了國際化水準。分別取得 ISO 9001/13485 國際認證、歐洲 CE/REACH 認證、美國 UL/FDA 認證、加拿大 CSA 認證、台灣甲等廠及精品獎認證、壓力容器 ASME 認證...及多國相關專利、商標註冊等。

我們已行銷136個國家，並在多國空壓市場居於領導地位。更透過不斷的精益求精、研發創新、達成我們「打造全球 **PUMA** 氣動中心！」的**經營宗旨**，隨著科技的演進及管理的提昇，使我們不斷的成長，我們在鞏固經濟層面後，更加強「公益、誠信、卓越、創新」**企業社會責任 (C.S.R.)**，重視「環保、節能、靜音」

的**使命**。

我們將成果回饋給所有合作夥伴，共創雙贏，並達到“有太陽的地方，就有 **PUMA**”的經營願景。



Not only does **PUMA** keep on researching and making innovation on our products, we also enforce our **quality policy**, "Better than better", on a daily basis. Furthermore, **PUMA** also masters on the high quality products and efficient management as core strategy competitive ability. To compete in the global market, we have obtained the ISO 9001 / 13485, CE / REACH, UL / FDA, CSA certificates, Taiwan Excellence Awards, pressure vessels certified by ASME, many multi-countries' patents and trademark registration.

Up to now, we have marketed our products in 136 countries and kept the top sales in many countries. **PUMA** will never satisfy with the current achievements. We believe that success is only achieved through innovation, pursuing excellence, and utilizing the most updated managerial and technological skills to help us grow. Meanwhile, **PUMA** is not only striving for financial stability but also paying more attention to the Company Social Responsibility (C.S.R.). We adhere to our **business philosophy** to be cooperative and honest with our partners. Moreover, it is also our **responsibility and mission** to pursue social equality, having good business ethics, and provide excellent products that are environment friendly, energy saving, and quiet.

We like to create more prosperous future with our partners and achieve our **goal** — —
"Where there is sunshine, there is **PUMA**".

- **Micro Computer Control** 全系列微電腦控制
- **Easy Maintenance** 維修容易
- **User Friendly** 操作簡易



靜音
Quiet

省電
Energy Saving

超效
Outstanding Efficiency

PUMA GLOBAL-WIDE MARKETING STRATEGIC ALLIANCE NETWORK

- 136 countries distributing.
- 3,850 services centers.
- 20,000,000 air compressor in service.
- 50,000,000 air tools in service.

世界名牌 全球服務 World Brand Globalized Service

Air power
空之能·氣蒼穹



Air expert
空氣的專家

醫療級

工業級

專業級

通用級



有太陽的地方，就有 PUMA! Where there is sunshine, there is PUMA!

選購要點

HOW TO CHOOSE



如何選購正確的空壓機 How to choose a screw compressor

壓力的決定

- 壓力越高，耗電越大。須考慮配管尺寸大小及長度所造成的壓力降，所有壓力降加上機器使用壓力即為空壓機排氣口最下限的壓力。
- 列出各種機器的使用壓力，如使用壓力相差太多時，則需購置不同壓力的空壓機或增壓機，根據實際需要選購，不可降低壓力使用，以免增加電費支出。

機型的選擇

- 計算出總實際使用風量再加上合理30%餘量為宜，以防不時之需。
- 注意耗電比值，以求省電，及實際排氣量(立方米/分)除以實耗功率(kW)，值越大越省電。

壓縮空氣品質

- 壓縮空氣中含有大量的水分，它對精密傳感器、氣動工具、氣動設備、閥、儀管路等造成莫大的傷害。因為水份會造成鏽蝕、堵塞儀器，降低成品品質、損壞設備而且增加修理維護工作。所以加裝壓縮空氣淨化系統確有其必要。
(參考氣配圖)

PRESSURE DETERMINATION

- The higher the pressure, the more electricity costs. The size and length of the pipe may cause some pressure drop, therefore the total pressure drop plus the required operating pressure is the minimum required compressor output pressure.
- Choose the pressure according to the actual requirement, or it will increase the unnecessary electricity cost.

AIR DEMAND AND MODEL SELECTION

- Calculate the total air demand and add reasonable capacity for contingent or unusual usage and future expansion.
- Check the ratio of air delivery (m^3/min) over the power consumption (kW). The bigger the ratio, the more efficient it is.

QUALITY OF THE COMPRESSED AIR

- Water in the compressed air will damage important components in the circulation system such as sensors, pneumatic tool, pneumatic devices, valve, pipes, etc. Because water will rust or obstruct the air passage, hence reduce the product quality and increase the cost for maintenance. It is necessary to install the "compressed air filtration system".

空壓機變頻改造方案：變頻箱

Improvement for your air compressor: Frequency Inverter Box

採用一個獨立節能變頻箱，只需將用戶原有空壓機系統的主電路和控制信號，接到對應的節能變頻箱接線端子上，並接入壓力傳感器，即可完成對空壓機的變頻改造工程。改造簡單，施工方便，不改變用戶習慣，保留原有介面和保護系統，同時也變於日後的保養和維修。

By installing an independent Frequency Inverter Box, with easy wiring instruction and adding the pressure sensor, the converting project is finished. It's an easy task for converting, no change on old interface and protection system. Same operation as old unit and easy maintenance for the owner.



型號 MODEL	馬力 HP	尺寸 W × H × D (cm)
FIC10	10	60×120×35
FIC20	20	60×125×35
FIC30	30	65×135×40
FIC50	50	100×180×60
FIC75	75	100×180×60
FIC100	100	100×180×60

備註 Remark :

1. 電壓 Voltage: 220V / 380V / 440V
2. 未列規格及特殊需求，請洽詢。
Special demand can be negotiated.
3. 傳統控制空壓機亦適用，加裝之後可達節能效益。
This control box is suitable to add on to the conventional air compressor to save energy.

多功能電腦版控制系統

Multi-function Micro Computer system



標準顯示 Standard Display

- 供氣壓力 / Pressure
- 電機電流 / Amperage
- 排氣溫度 / Temperature
- 運行總時間 / Total Running Time

預警與提示 Warning And Alarm

- 更換油過濾器 / Change Oil Filter
- 壓縮腔排氣溫度過高 / Discharge Over Heat
- 更換空氣過濾蕊 / Change Air Filter Elements
- 更換油氣分離器濾蕊 / Change Oil / Air Separator

可調節工作參數 Adjustable Parameters

- 壓力上限 / Max. Pressure
- 工作壓力 / Working Pressure
- 風機啟動溫度 / Temp. To Start Fan
- 風機停機溫度 / Temp. To Stop Fan
- 星角延時時間 / Y-Δ Delay
- 加載延時時間 / Load Time Delay
- 空載延時時間 / Unload Time Delay
- 主機啟動時間 / Main Motor Delay
- 停機延時時間 / Stop Delay Time
- 啟動延時時間 / Blowdown Time Delay
- 風機啟動時間 / Cooling Fan Starting Time

故障停機保護 System Protection

- 傳感器失靈保護 / Sensor Out
- 電機逆相保護 / Phase Reversal
- 系統超溫保護 / System Over Heat
- 排氣超溫保護 / Over Heat In Discharge
- 供壓超壓保護 / Over Pressure In Discharge
- 聯動保護 / Multi Units Connecting Protection
- 對電機具有短路、堵轉、缺相、過載、不平衡等全方位保護功能

高品質高性能部件

High Quality and High Performance Parts

空氣濾清器 Air filter element



過濾空氣中雜質、粉塵、水份，減低轉子、軸承磨損，保證整機性能。

Dust, powder, moisture are removed through this two-stage air filter, ensuring the constant supply of clean air into the compressor.

機油過濾器 Oil filter



過濾潤滑油雜質 (10 μ 以下)，提供乾淨之潤滑油潤滑轉子、軸承。

The oil filter removes any excess impurities in compressor oil (filtering capacity: 10micron).

油氣分離器 Oil / Air separator



採高效率分離裝置，有效分離油氣，使出氣含油低於2PPM以下。

Removes any trace of lube oil and mist through a dense fiber element to produce clean air with oil content below 2PPM.

電磁閥 Solenoid valves



採用防水性之進口磁閥，作動壽命達50萬次以上。

By utilizing a water proof solenoid valve, it prolongs the life cycle of the compressor.

壓力傳感器 Pressure sensor



特別設計使用於工業環境系統，依據 EU EMC 抗干擾保護設計，具溫度補償及使用雷射校正，使用耐酸鹼不銹鋼 AISI 316L 的材質。

A high-performance pressure sensor that can continuously detect any slight changes in the line pressure and balance automatically.

螺旋專用油 Puma oil



黏度穩定、抗氧化性、防積垢形成能力特高。

Thermal stability with excellent resistance to oxidation, prevent sludge and deposit formation.

SL系列 SL SERIES



皮帶式規格 / BELT TYPE

						
Model	HP - KW	Kg/cm ²	M ³ /min/CFM	Cooling	cm	Kg
SL10	10 7.5	8	1.1 / 39	Air	80x70x95	250
SL15	15 11	8	1.5 / 53	Air	98x80x120	350
SL20	20 15	8	2.3 / 81	Air	98x80x120	400
SL30	30 22	8	3.3 / 117	Air	115x90x138	600
SL50	50 37	8	6.1 / 216	Air	130x95x147	800

直聯式規格 / DIRECT COUPLING

						
Model	HP - KW	Kg/cm ²	M ³ /min/CFM	Cooling	cm	Kg
SL20D	20 15	8	2.3 / 81	Air	138x86x115	420
SL30D	30 22	8	3.5 / 124	Air	138x85x115	600
SL50D	50 37	8	6.0 / 212	Air	135x100x127	850
SL75D	75 55	8	9.6 / 339	Air	190x125x160.5	1700
SL100D	100 75	8	12.0 / 424	Air	190x125x160.5	1850
SL125D	125 90	8	15.0 / 530	Air	200x125x168	1950
SL150D	150 110	8	19.8 / 699	Air	270x147x184	2700
SL175D	175 132	8	23.2 / 820	Air	270x147x184	2900
SL215D	215 160	8	27.6 / 974	Air	270x147x184	3200
SL250D	250 185	8	30.4 / 1073	Air	320x200x205	3500
SL300D	300 220	8	35.0 / 1237	Water	320x200x205	4000
SL335D	335 250	8	41.0 / 1449	Water	320x200x205	4500
SL425D	425 315	8	50.2 / 1773	Water	350x200x205	6000
SL475D	475 355	8	61.0 / 2154	Water	350x200x205	6500
SL535D	535 400	8	68.1 / 2405	Water	380x200x205	7200

SL變頻系列 SL FREQUENCY INVERTER



永磁式規格 / PM TYPE

Model	HP - KW	Kg/cm ²	M ³ /min/CFM	Cooling	cm	Kg
SL20PM	20 15	8	2.20 / 77	Air	120x86x110	420
SL30PM	30 22	8	3.40 / 120	Air	120x86x110	650
SL50PM	50 37	8	6.10 / 215	Air	135x100x122	800
SL75PM	75 55	8	9.25 / 326	Air	190x125x160.5	1700
SL100PM	100 75	8	12.00 / 424	Air	190x125x160.5	1850

直聯變頻式規格 / VSD DIRECT COUPLING

Model	HP - KW	Kg/cm ²	M ³ /min/CFM	Cooling	cm	Kg
SL20DV	20 15	8	2.3 / 81	Air	138x86x115	420
SL30DV	30 22	8	3.5 / 124	Air	138x86x115	600
SL50DV	50 37	8	6.0 / 212	Air	135x100x127	850
SL75DV	75 55	8	9.6 / 339	Air	190x125x160.5	1700
SL100DV	100 75	8	12.0 / 424	Air	190x125x160.5	1850
SL125DV	125 90	8	15.0 / 530	Air	200x125x168	1950
SL150DV	150 110	8	19.8 / 699	Air	270x147x184	2700
SL175DV	175 132	8	23.2 / 820	Air	270x147x184	2900
SL215DV	215 160	8	27.6 / 974	Air	270x147x184	3200
SL250DV	250 185	8	30.4 / 1073	Air	320x200x205	3500
SL300DV	300 220	8	35.0 / 1237	Water	320x200x205	4000
SL335DV	335 250	8	41.0 / 1449	Water	320x200x205	4500
SL425DV	425 315	8	50.2 / 1773	Water	350x200x205	6000
SL475DV	475 355	8	61.0 / 2154	Water	350x200x205	6500
SL535DV	535 400	8	68.1 / 2405	Water	380x200x205	7200

● 變頻電機可另行選購 Inverter Duty Motor is an optional item.

變頻節能裝置

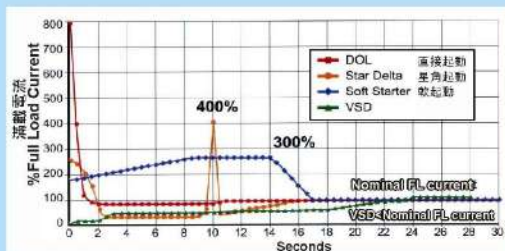
VSD ADVANTAGES

變頻裝置節能優點 Variable Speed Drive advantages

變頻起動 Frequency Inverter Starting

變頻軟性起動，線性運轉平穩，無傳統直接起動或Y-△起動大電流。大幅延長電磁接觸器、馬達或壓縮機體使用壽命。

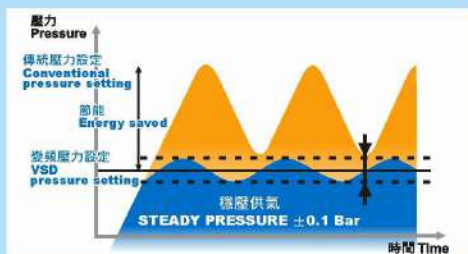
Has small slope amperage increase compared to other starting methods, hence it will prolong the service life of motor, contractor and compressor.



恒壓供氣 Steady Pressure Air Supply

變頻控制可以即時反應客戶使用的風量變化，供氣壓力穩定在 $\pm 0.1 \text{ kg/cm}^2$ 下，沒有傳統空壓機空重車壓差值所需 $1\sim 2 \text{ kg/cm}^2$ 的設定，因此可節省運轉電費。

By maintaining the set pressure $\pm 0.1 \text{ bar}$, the VSD will save a good portion of electrical consumption.



負載管理 Total Load Managing System

僅需一台變頻式空壓機作負載管理，與多台傳統式空壓機並聯節能運轉。可改善整個空壓系統運轉效率，提高客戶的競爭力。

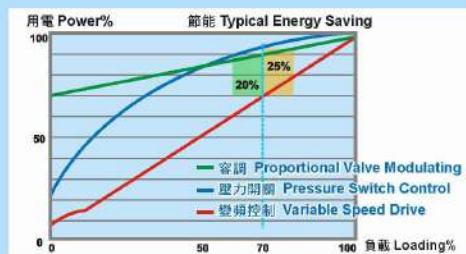
By adding only one VSD unit to the other conventional air compressors, as an energy efficient network, the whole system will improve the operation efficiency greatly.



節能控制 Energy Saving Control

變頻空壓機提供30%~100%線性無段容調控制，依客戶壓縮空氣的負載變化，自動控制馬力消耗，做節能控制。可大幅降低運轉成本。

Provides best energy performance for load range of 30%~100%, and reduces the cost of operation by up to 25%.



項目 Item	類別 Type	定頻 Conventional unit	變頻 VSD unit
使用壓力 Set pressure		6~8 kg/cm ²	7 kg/cm ²
頻率及馬力 Frequency & HP		60HZ (50HP)	18~60HZ (15HP~50HP)
空載電流(電壓) Unloading amp (Voltage)		53.5A (219V)	11A (225V)
滿載電流(電壓) Rated amp (Voltage)		117.6A (214V)	107.3A (222.1V)
空負載比例耗電值 Load / unload ratio	空載 Unload 50%	$\sqrt{3} \times 219 \times 53.5 \times 0.875 \div 1000 = 17.76 \text{ kW}$	滿載時 Full load
	負載 Full load 50%	$\sqrt{3} \times 214 \times 117.6 \times 0.875 \div 1000 = 38.14 \text{ kW}$	穩壓時 Constant load
每小時耗電 Hourly energy consumption		$38.14 \times 50\% + 17.76 \times 50\% = 27.95 \text{ kW}$	$36.12 \times 8 \times 7 = 31.6 \text{ kW}$
每小時省電 Hourly energy saving		27.95 - 15.8 = 12.15 (kW)	

備註：kW(馬達功率 motor kW) = $\sqrt{3} \cdot E$ (電壓 voltage) $\cdot I$ (電流 amp) $\cdot \cos\theta$ (功率因數 PF) $\div 1000$



省電效率：12.15÷27.95=0.44 (44%) 事事平安！
Efficiency energy saver

水潤滑無油 WATER INJECTION OIL FREE



Model	HP - KW	WORK Kg/cm ²	AIR M ³ /min/CFM	Cooling	cm	Kg
SW5	5	4	8 0.55 / 19.42	Air	110×100×140	255
SW7	7.5	5.5	8 0.81 / 28.60	Air	110×100×140	265
SW10	10	7.5	10 0.71 / 25.07	Air	110×100×140	290
SW15	15	11	8 1.12 / 39.56	Air	110×100×140	320
SW100	100	75	10 1.02 / 36.02	Air	110×100×140	320
SW125	125	90	8 1.71 / 60.39	Water	245×140×160	2000
SW150	150	110	10 1.39 / 49.09	Water	245×140×160	2250
			8 17.3 / 611.03	Water	2600×1500×1600	2500
			10 15.1 / 533.33			

優點 / ADVANTAGES

- 完全無油壓縮，提供100%無油壓縮空氣。
Water-lubricated screw compressor delivers 100% oil-free compressed air.
- 專利設計軸承、使用壽命長。
Due to patented design, the bearing has longer service.
- 水潤滑為單級壓縮，更高的壓縮效率。
Water-lubricated isothermal compression result in higher efficiency.
- 潤滑水循環使用成本低。
Low operating cost with water circulation.
- 無油過濾器、油氣分離器，維護成本低。
Low maintenance cost because no oil filter, no oil/air separator.
- 低轉速、低噪音、振動小、無需增速齒輪。
Low speed, low noise, low vibration, without transmission gears.
- 壓縮空氣中不含油，無需特殊處理。
No oil in the system hence easy treatment for compressed air.
- 適合長時間滿負載運轉工作。
Suitable for long full load operation due to low operating temperature.
- 最大工作力: 15kg/cm²。
Max. Working Pressure: 15kg/cm².



儲氣桶 AIR TANK



型號 Model	桶容量 TANK		尺寸 SIZE cm	淨重 WEIGHT kg	參考值 REFERENCE HP
	Liter	Gal			
V-88	88	25	50x 50x110	35	1~3
V-110	110	30	50x 50x130	50	5
V-155	155	40	55x 55x150	70	7.5
V-228	228	60	65x 65x155	115	5~10
V-285	285	75	65x 65x185	130	10~20
V-360	360	95	75x 75x160	150	10~20
V-456	456	120	75x 75x190	180	20~30
V-660	660	175	95x 95x190	220	30~40
V-1000	1000	265	105x105x230	380	50~75
V-1260	1260	330	120x120x240	420	75~100
V-1500	1500	395	120x120x270	500	100
V-2000	2000	525	120x120x310	600	150

- 標準桶耐壓10kg/cm²，高壓另議。
Standard barrel pressure 10kg/cm², high pressure on another discussion.
- 水潤滑另選配不銹鋼材質。
Selecting stainless material for water injection oil free.

精密型油霧過濾器 HIGH EFFICIENCY FILTER

除塵/除臭/除水 Dust Elimination / Deodorant / De-Hydro

- **GQ / TLQ**
5 Micron
Fiberglass
玻璃纖維
- **GP / TLP**
1 Micron
0.5 mg/m³
Borosilicate fiber
矽酸纖維
- **GH / TLH**
0.01 Micron
0.01 mg/m³
Borosilicate fiber
矽酸纖維
- **GC / TLC**
0.003 mg/m³
Activated Carbon
活性炭
- **GX / TLX**
0.001 mg/m³
Activated Carbon
活性炭



型號 Model	出入口管徑 Pipe size NPT	處理風量 Flow rates		外型尺寸 Dimensions (mm)				淨重 WEIGHT (KG)
		NM ³ /min	SCFM	A	B	C	D	
009	1/2"	0.9	32	91	25	265	18	1.4
019	3/4"	1.9	67	91	25	265	18	1.4
033	1"	3.3	116	115	30	415	31	2.8
040	1 1/2"	4.0	145	115	30	415	31	2.8
060	1 1/2"	6.0	212	115	30	415	31	2.8
070	2"	7.0	250	160	40	585	35	6.4
100	2"	10	353	160	40	585	35	6.6
140	2"	14	494	160	40	585	35	6.8
200	2 1/2"	20	706	180	50	730	42	11.0
280	2 1/2"	28	988	180	50	945	55	13.4
350	3"	35	1235	220	60	760	42	17.4



流量換算表 Flow Conversion Chart

LPM l/min	CMH m³/hr	CFM ft³/min	GPM(U.K.) Gal/min	GPM(U.S.A.) Gal/min
1	0.06	0.03532	0.220	0.2642
16.667	1	0.5887	3.667	4.404
28.3153	1.699	1	6.229	7.481
4.5455	0.2727	0.1605	1	1.2011
3.785	0.2271	0.1337	0.8325	1

單位換算表 Conversion Factors

1. 扭力 TORQUE	1 ft-lb = 1.356 nm = 0.138kg-m 1 nm = 0.738 ft-lb = 0.102 kg-m
2. 長度 LENGTH	1 m = 39.371 in = 3.281 ft 1 ft = 12 in = 0.305 m 1 in = 25.4 mm
3. 重量 WEIGHT	1 lb = 0.454 kg = 16 oz 1 kg = 2.205 lb = 35.274 oz 1 oz = 28.35 g = 0.063 lb
4. 功率 POWER	1 kW = 1.341 HP 1 HP = 0.746kW 1CV = 1 PS = 0.735 kW
5. 濃度 CONCENTRATION	1 mg/m³ = 0.001 mg/L = 0.001 ppm 1 ppm = 1000 mg/m³ = 1 mg/L

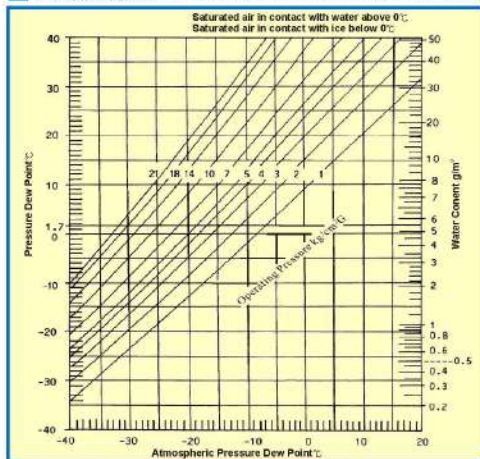
真空換算表 Vacuum Conversion Chart

mbar	Pa (N/m²)	Torr (mmHg)	mmAq (H₂O)	atm
1	100	0.75	10.2	9.87x10⁻⁴
0.01	1	7.5x10⁻³	0.102	9.87x10⁻⁶
1.33	133	1	13.6	1.32x10⁻³
9.81x10⁻²	9.81	7.36x10⁻²	1	9.68x10⁻⁵
1013	101325	760	10332	1

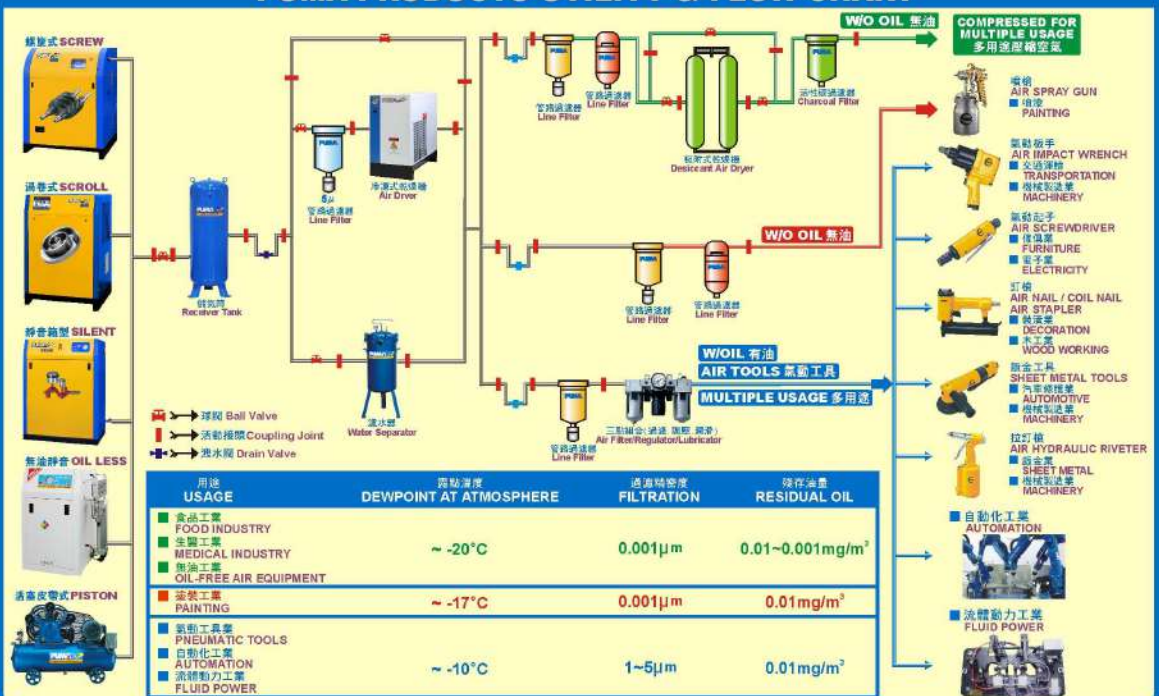
壓力換算表 Pressure Conversion Chart

Bar	KPa	Kg/cm²	MPa	Psi
1	100	1.02	0.1	14.5
0.981	98.1	1	0.098	14.22
10	1000	10.197	1	145.036

壓力露點轉換表 Pressure-dew Point Conversion Table



PUMA巨霸全系列產品及氣配圖 PUMA PRODUCTS UTILITY & FLOW CHART



HONOR



PUMA products , reliable quality



PUMA INDUSTRIAL CO., LTD.

合正機械股份有限公司 www.pumaair.com

OFFICE & FACTORY :

NO. 427, Sec. 2, Doujiong Rd., Tianjiong Township, Changhua County 520, Taiwan

Export dep.

T:886-4-8761811 F:886-4-8752211

sales@pumaair.com

Domestic dep.

T:04-8752101 F:04-8762385

dd@pumaair.com



ISO-9001 / 13485



REACH

(SPECIFICATION SUBJECT TO CHANGE WITHOUT NOTICE.)

PIC-1711SL
© 2017