

# TMV & TS SERIES

## SCREW AIR COMPRESSOR

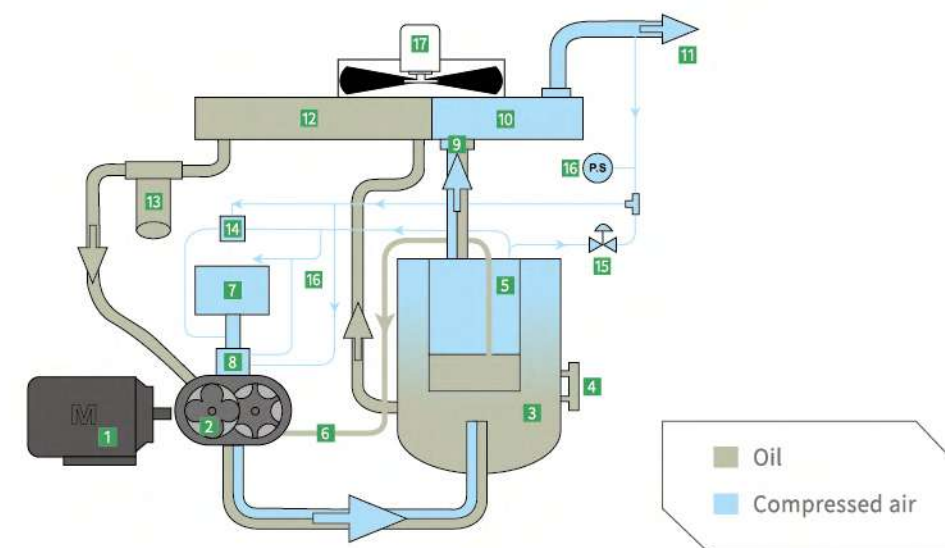


# T S SERIES

If you constantly use air compressors at work, SWAN direct drive models are your best option. Few moving components (no intermediate pulleys or belts), life and reliability are the highest, TS series can withstand constant use in industrial setting. Since the crankshaft is attached directly to the motor, less energy is lost during operation. This energy efficiency makes TS series to be economical choice for heavy industrial uses.

Sound insulation material combined with excellent rigid structure design.

Smart control panel ensures the smooth starting and other multiple function, self-check, service reminder, faults indicator or sequential control, etc. that bring user extremely experience.



- |                                |                          |
|--------------------------------|--------------------------|
| 1 Main motor                   | 10 After cooler          |
| 2 Screw air end                | 11 Compressed air outlet |
| 3 Oil separator tank           | 12 Oil cooler            |
| 4 Oil level indicator          | 13 Oil filter            |
| 5 Oil separator element        | 14 Unloading valve       |
| 6 Oil recovery pipe            | 15 Regulator             |
| 7 Suction filter               | 16 Pressure sensor       |
| 8 Suction valve                | 17 Cooling fan           |
| 9 Minimum pressure check valve |                          |



PERFECT



PRECISION



TRUST



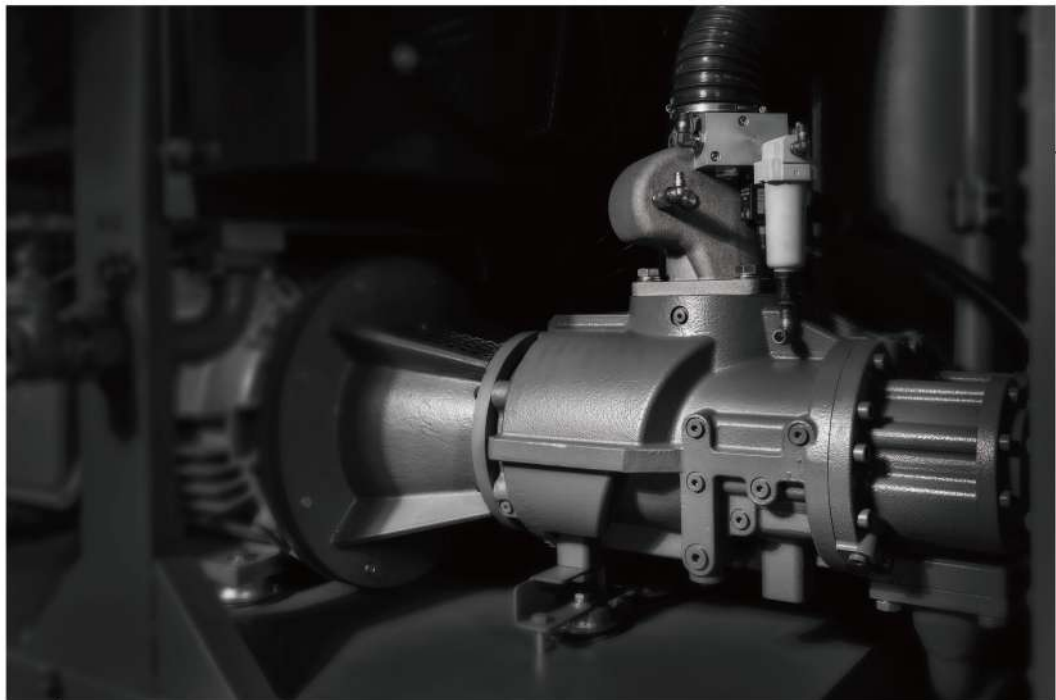
EFFICIENCY

## ◆ TS-AD SERIES

Model	TS-22-AD	TS-37-AD	TS-55-AD	TS-75-AD
Suction Air Conditions	1 Atm, 2~40°C			
Air Discharge Temperature °C	≤ Ambient Temp +13°C			
Working Pressure kg/cm <sup>2</sup>	8	8	8	8
Free air Delivery(F.A.D) m <sup>3</sup> /min	3.5	6.19	9.3	12
Motor Rated Horsepower kW/HP	22/30	37/50	55/75	75/100
Noise Level dB(A)	70	74	75	71
Power Transmitting	Couplings			
Air Discharge Connection PT	1¼"	1½"	2"	2½"
Outer Dimensions mm	1460x900x1450	1650x1174x1580	2480x1435x2000	2480x1435x2000
Weight kg	713	1060	2190	2220

※Reserve the right to alter design or specifications. Due to time lag, actual specification may differ from that shown above.

※Other specific requirement about working pressure, horsepower, air delivery, etc. are available upon request.



## High Levels Of Distinctive Modular Design

With distinctive modular design and user friendly operating system, the new developed TS series is able to provide reliable operation, quiet running and easy maintenance. Its high efficient air end is dependable under long period of continuous operation.



### Powerful and Quiet Running

High rigid structure with special noise-proof material and high air circulation system to ensure low noise and continuous running capability.



### Versatile and User Friendly Control System

The machine is equipped with versatile module control, user friendly operation controller, multi-units remote control and overload protection device... etc., which make it easy to operate and maintain.



### Easy Maintenance

Easy to access to all related components, which makes trouble-shooting and general maintenance easy.

# QUALITY

# POWERFUL

# HIGH RELIABILITY

# TMV SERIES



1

## Air Intake Filter

Large flow, low pressure loss, double-layer design, low noise.



3

## Air Suction Valve

Unique design to ensure large air flow and low differential pressure, optimizes the inlet flow and improve efficiency.



4

## Air/Oil Cooler

Vertical design, easy to clean, maintain and drain oil.



2

## Intelligent Control Panel

ensures the smooth starting, stable air supply, service reminder, faults indicator and sequential control, etc.

Efficient permanent magnet screw compressor TMV series offer increased energy efficiency compared to conventional asynchronous motors. Direct drive transmission ensures minimal losses, and new generation in-house designed screw elements with improved efficiency TMV series bring users reliable operation and extremely experience.



5

## Oil Separator Tank

Remarkable air/oil separation efficiency by cyclonic oil-air pre-separation. The cover of oil separator tank is easy-moving designed to make the replacement of air/oil separator element more easily.



6

## Centrifugal Cooling Fan

The inner rotor fan with higher cooling efficiency, lower noise than axial fan. No risk of high temperature damage.



7

## Two-Stage Permanent Magnet Motor and Air End

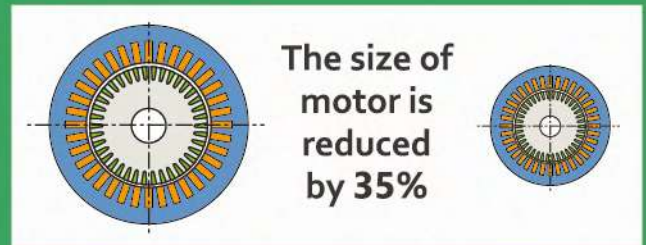
Horizontal design, reduce vibration and noise, durable single coaxial shaft design with high efficiency and low maintenance.



## Higher Efficiency Than IE4 Motors.

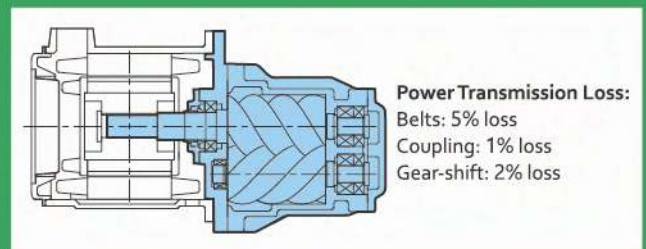
Wider variable frequency range: 30%~100%, which ensures better energy-saving performance at lower running speed. Permanent magnet motor is 35% smaller than ordinary motors, which minimize space occupation.

With F-class insulation and excellent air-cooling system to avoid motor being damaged by high temperature.



## Single Coaxial Shaft, Direct-drive Compressors.

Without belts, gears and coupling, which results in ZERO power transmission loss in running. Reduce the size by 20% and leave more available space inside the machine cabinet.



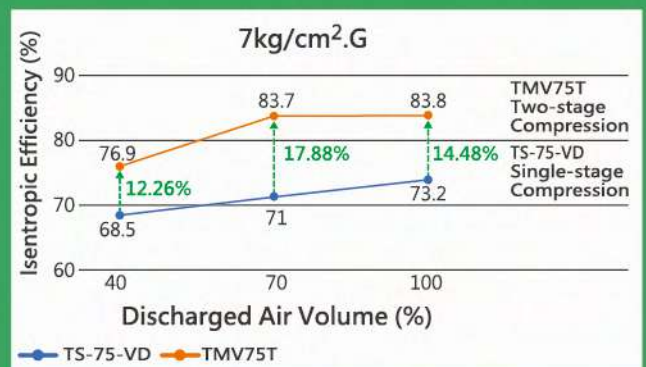
## Single Coaxial Shaft, Double Stages, Two Independent Permanent Magnet Motors.

Isobaric compression lowers down the compressing ratio, which increase the service life of seal gasket and raise its volumetric efficiency.

Injecting oil to cool down the compressed air between the first stage and the second stage, to reach to isothermal compression operation for energy-saving.

The traditional two-stage gear-shift design only has the best compressing efficiency at its fixed setting-pressure. It's difficult to maintain the best efficiency when the air consumption or pressure is changed.

TMV models overcome the general fixed gear-shift problem. It can automatically adjust the running speed of each motor while the discharged air pressure is changed and always keep the air end in optimal running efficiency.





## ENERGY SAVING

### The Best Performance: Two Stages Two Permanent Magnet Variable Speed Motor.

Adjust the pressure of each stage inside the air-end independently to achieve best working efficiency.



### Single Coaxial Shaft, Single Stage, Direct-drive, Permanent Magnet Variable Speed Motor.

Without gears and coupling, which results in space-saving and zero power transmission loss when running.

## TMV SERIES

型式	TMV11Z	TMV15	TMV22	TMV37	TMV37T	TMV75TU	TMV110TU	TMV160TZ
Suction Air Conditions	1 Atm, 2~40°C							
Air Discharge Temperature °C	≤ Ambient Temp +13°C							
Working Pressure kg/cm <sup>2</sup>	8	8	8	8	8	8	8	8
Free air Delivery (F.A.D) m <sup>3</sup> /min	1.75	2.51	3.5	6.37	7.52	15.5	22.89	31.80
Motor Rated Horsepower kW/HP	11/15	15/20	22/30	37/50	37/50	75/100	110/150	160/215
Noise Level dB(A)	67	70	70	73	68	71	73	78
Power Transmitting	Single-stage coaxial shaft				Double-stage, double-motor, coaxial shafts			
Air Discharge Connection PT	1"	1"	1¼"	1½"	2"	2½"	3"	4"
Outer Dimensions mm	1250x795x1585	1250x795x1585	1190x1145x1575	1485x1145x1750	1780x1300x1680	2335x1600x2140	2770x1485x1990	3080x1730x2220
Weight kg	387	387	734	870	1460	2630	3080	3700

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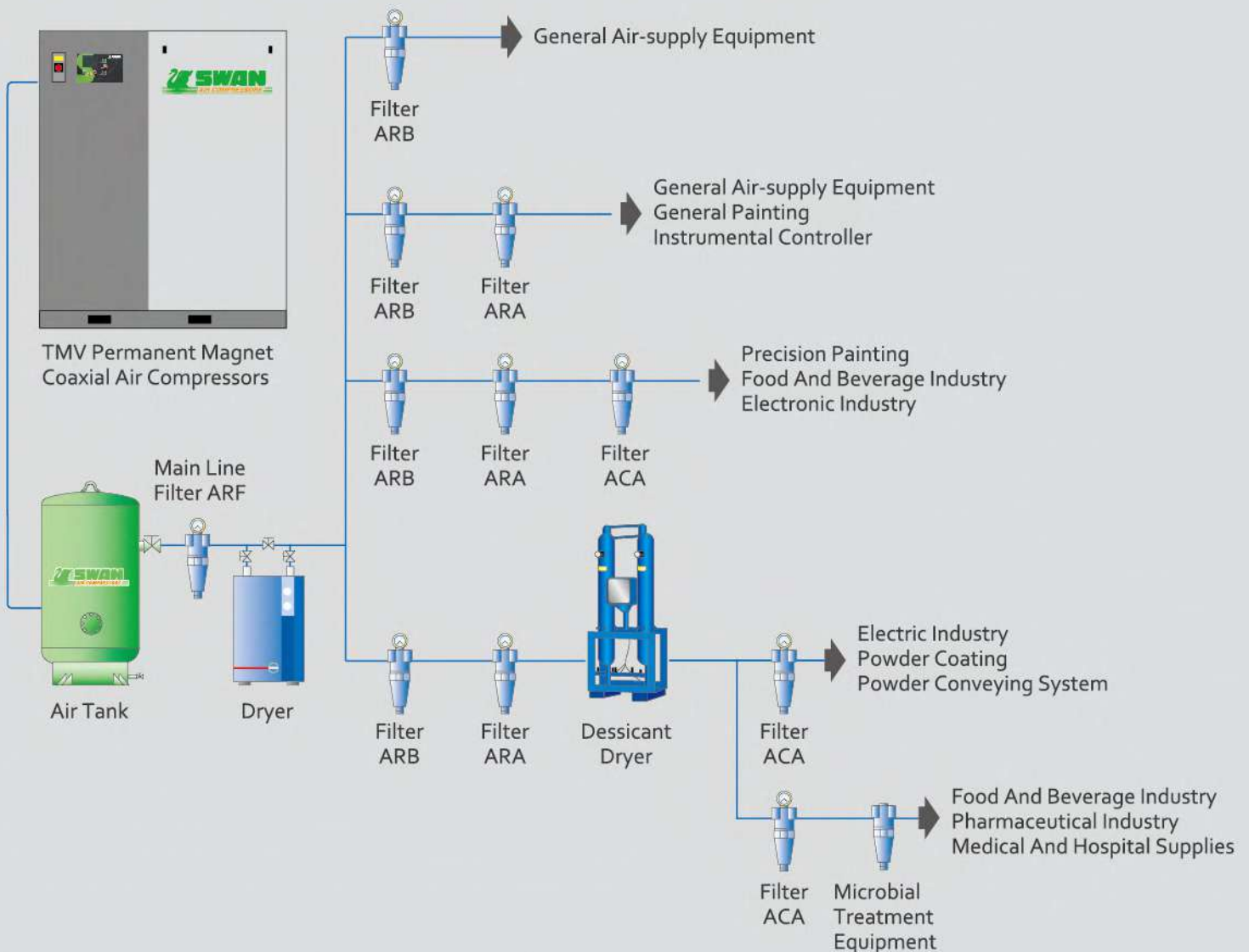
※Other specific requirement about working pressure, horsepower, air delivery, etc. are available upon request.





※ We supply different grade of air filtrating systems to meet various applications.

## ◆ Compressed Air Purifying System



※ Compressed air purifying system is subject to the required quality of compressed air.  
If there is any questions on the equipment assembly, please feel free to contact us.



## ◆ How to install the air compressor properly

Locate the air compressor unit at good ventilation area and avoid exposure to sunlight and rainy environment. The location should be dry and free from dust and corrosive materials. The ambient temperature should be controlled within the allowable range to prevent too high or too low temperature to affect the compressor performance.

If the compressor is installed in a place with lots of dusts and impurities, additional dust filter installation will be needed. Ensure the floor is level and of sufficient strength, to lower the vibration during operation. Keeping a distance of more than 100cm against the wall to help heat dissipation and air circulation surrounding the air compressor unit.

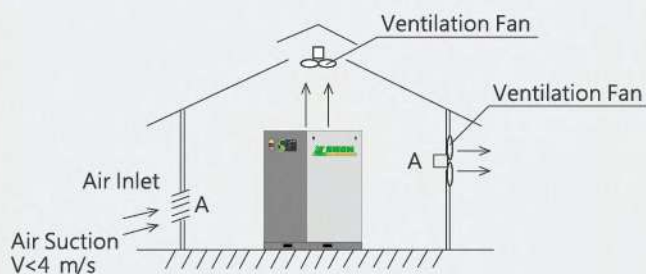
### ⚠ When the above said conditions cannot be satisfied ...

Please confirm there is enough space for air intake and air discharge.

Please use a ventilation fan or air discharge duct to ensure sufficient heat dissipation.

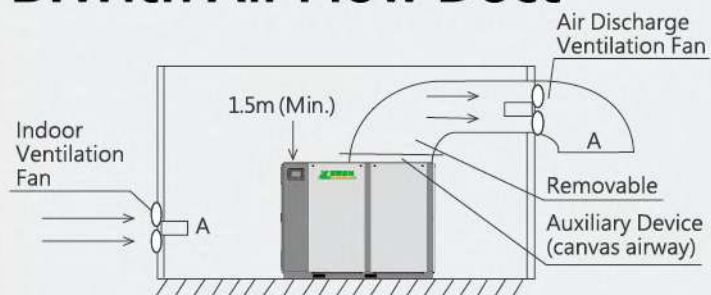


### A. Without Air Flow Duct



- 1 Install the ventilation fan above the air compressor outlet port, and install the air inlet at the lower area.
- 2 The wind speed at the air inlet area should be lower than 2M/s.

### B. With Air Flow Duct



- 1 An auxiliary device should be installed between the suction port of the air duct and the compressor air outlet port. The distance (H) between them should be kept between 200mm-300mm to ensure the normal fan operation.
- 2 The wind speed at the air inlet area should be lower than 2M/s.

### Required air ventilation volume for screw air compressor (not included air dryer)

Rated power for the whole air compressor unit	kW	11	15	18	22	30	37	45	55	75	90	110
Ventilation air volume (without air duct)	m <sup>3</sup> /min	110	150	180	220	300	370	450	550	750	900	1100
Size of the air ventilation port (without air duct)	m <sup>2</sup>	0.50	0.69	0.90	1.12	1.37	1.80	2.05	2.50	3.40	4.10	5.00
Ventilation air volume (with air duct)	m <sup>3</sup> /min	40	60	80	100	120	135	157	192	262	314	384
Size of the air ventilation port (with air duct)	m <sup>2</sup>	0.18	0.26	0.34	0.43	0.52	0.58	0.69	0.84	1.15	1.37	1.68

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