



PMV VSD Series — Spec Sheet

Permanent Magnet Variable Frequency Screw Air Compressors

2026 EDITION

AirSpace Machinery Co., Ltd. • Power On, Worry Off

35%

ENERGY DELTA

±0.1

BAR STABILITY

55°C

AMBIENT RATING

IE5

MOTOR CLASS

12-18 mo

PAYBACK

CE

EUROPEAN CONFORMITY

ISO

9001 : 2015 QUALITY

01 Product Overview

AirSpace **PMV (Permanent Magnet Variable Frequency)** series represents our core technology — IE5 ultra-premium efficiency motors paired with intelligent VFD drives. The PMV platform delivers a verified **35% energy delta** over fixed-speed compressors, with **±0.1 bar** pressure stability, **55°C ambient rating**, and whisper-quiet operation.

ENGINEERING HERITAGE — AT A GLANCE

20 years of engineering excellence · 4,000 m² advanced manufacturing facility in Shanghai · 100M+ RMB annual sales · BAOSI 5:6 asymmetric rotors (15% internal-friction reduction) · IE5+ permanent magnet synchronous motors · 35-day factory-direct delivery with pre-cleared customs dossiers · CE & ISO 9001:2015 certified, serving 30+ countries.

02 Model Range Overview

17 models · 2–180 HP

Full PMV range from 2 HP to 180 HP. All models rated 8–10 bar; FAD values measured at 8 bar. Dimensions in millimetres (L×W×H).

Model	Power (kW)	Power (HP)	Pressure (bar)	FAD (m ³ /min) @ 8 bar	Noise dB(A)	Dimensions (mm)	Weight (kg)
LY-2PMV	1.5	2	8–10	0.18	58	800×600×900	120
LY-3PMV	2.2	3	8–10	0.26	58	800×600×900	130
LY-5PMV	4	5	8–10	0.52	60	900×700×1000	180
LY-7.5PMV	5.5	7.5	8–10	0.78	62	1000×800×1100	250
LY-10PMV	7.5	10	8–10	1.1	63	1100×850×1200	320
LY-15PMV	11	15	8–10	1.8	64	1300×900×1300	420
LY-20PMV	15	20	8–10	2.4	65	1300×900×1300	460
LY-25PMV	18.5	25	8–10	3.0	66	1400×950×1400	520
LY-30PMV	22	30	8–10	3.6	67	1400×950×1400	560
LY-40PMV	30	40	8–10	5.2	69	1600×1100×1500	680
LY-50PMV	37	50	8–10	6.5	70	1600×1100×1500	720
LY-60PMV	45	60	8–10	7.8	71	1800×1200×1600	850
LY-75PMV	55	75	8–10	9.5	72	1800×1200×1600	920
LY-100PMV	75	100	8–10	12.8	74	2000×1300×1700	1100
LY-120PMV	90	120	8–10	15.5	75	2100×1400×1800	1350
LY-150PMV	110	150	8–10	18.8	76	2200×1500×1900	1600
LY-180PMV	132	180	8–10	22.5	78	2400×1600×2000	1850

FAD = Free Air Delivery. Values at standard reference conditions (20°C, 1 bar(a), 0% RH). Subject to manufacturing tolerance; contact factory for certified performance curves.

03 Technical Specifications

Specification	Value
Motor Type	IE5 Permanent Magnet Synchronous
Drive Type	Variable Frequency Drive (VFD)
Pressure Stability	±0.1 bar
Ambient Temperature Range	−10°C to +55°C
Cooling Type	Air-cooled (standard) / Water-cooled (optional)
Noise Level	58–78 dB(A) depending on model
Protection Class	IP54 (standard) / IP55 (optional)
Insulation Class	Class F / H
Power Supply	220V / 380V / 415V / 440V, 3-phase, 50/60 Hz
Control System	7-inch Touchscreen HMI with PLC
Communication	Modbus RTU (standard), Ethernet/IP (optional)
Oil Separation	3-stage, ≤2 ppm carryover
Cooling Fan	Thermally controlled variable speed
Paint	RAL 5015 (Blue) / Custom colors available

04 Energy Savings — 35% Energy Delta

Representative comparison for a 75 kW (100 HP) system running 6,000 hours/year at US\$0.12/kWh. The PMV VFD eliminates the idle-power "Unload Tax" and matches motor speed to real air demand.

\$28,280
TOTAL ANNUAL SAVINGS

Cost Component	Fixed-Speed	PMV VSD	Annual Savings
Electricity (\$0.12/kWh)	\$64,800	\$42,120	\$22,680
Maintenance (est.)	\$3,200	\$1,800	\$1,400
Unload Tax (idle losses)	\$4,800	\$600	\$4,200
Total Annual Operating Cost	\$72,800	\$44,520	\$28,280

Payback period: 12–18 months on average across all models

Figures are illustrative based on a typical duty profile (60–70% average load) and standard export power pricing. Request the AirSpace ROI Worksheet for a plant-specific calculation.

05 Key Features

- **IE5 Permanent Magnet Motor** — 96%+ efficiency, exceeds IE4/IE5 standards.
- **55°C Ambient Rating** — No derating in tropical climates, full output at 55°C.
- **35-Day Factory-Direct Delivery** — vs 12–20 weeks industry standard.
- **Low Noise — 58–78 dB(A)** — suitable for indoor installation without sound enclosure.
- **3-Stage Oil Separation** — ≤2 ppm carryover, extended filter life.
- **IP54 Protection** — dust and splash resistant, suitable for harsh environments.
- **Intelligent VFD** — ±0.1 bar pressure stability eliminates the "Unload Tax".
- **Dual-Source Air Ends** — LY series air ends from trusted Taiwanese / Japanese partners.
- **Smart Controller** — 7-inch HMI touchscreen, remote monitoring, Modbus, data logging.
- **Compact Footprint** — space-saving design with integrated pre-filter and oil separator.
- **Anti-Vibration** — rubber isolation mounts, heavy-duty steel frame.
- **21 CFR Part 11 Compliant Data Logging** — available on request for pharma applications.

06 Optional Accessories

- ▶ **Refrigerated Air Dryer** — integrated or standalone.
- ▶ **Pre-Filter + Micro-Filter + Activated Carbon** bundles.
- ▶ **Stainless Steel Air Receiver Tank** (304SS / 316L).
- ▶ **Remote Monitoring Platform** — web + mobile app.
- ▶ **Energy Meter** — certified, sub-meter ready.
- ▶ **Desiccant Dryer** — -40°C dew point.
- ▶ **0.22 µm Sterile-Grade Terminal Filter.**
- ▶ **Heat Recovery System** — up to 80% heat recovery.
- ▶ **Sound Enclosure** — for ultra-low noise requirements.
- ▶ **Automatic Condensate Drains** — zero-loss type.

07 Applications

- ▶ **Automotive Manufacturing** — paint shops, pneumatic tools, robotics.
- ▶ **Food & Beverage** — packaging, conveying, bottling.
- ▶ **Textile** — spinning, weaving, dyeing machinery.
- ▶ **Power Plants** — instrument air, plant utility air.
- ▶ **General Manufacturing** — factory automation, assembly lines.
- ▶ **Electronics** — PCB assembly, cleanroom air.
- ▶ **Pharmaceutical** — non-contact compressed air, utility air.
- ▶ **Metal Processing** — laser cutting, plasma cutting, CNC.
- ▶ **Construction** — pneumatic tools, drilling.



Power On, Worry Off

High-Performance Industrial Air Compression Systems

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Certification: CE & ISO 9001:2015 · ISO 8573-1 Class 0 (oil-free series)



EUROPEAN CONFORMITY



9001 : 2015 QUALITY

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