

M I D - P R E S S U R E S C R E W A I R C O M P R E S S O R

MID-PRESSURE SCREW AIR COMPRESSOR CATALOG

Hard-Core Industrial Series — AS-15HPM to AS-160HPM

Engineered for PET Blowing. The stable choice for high-pressure PET blow-moulding — ± 0.1 bar pressure stability across a **1.6–4.0 MPa** delivery range, on IE5 permanent-magnet drives rated for **55°C** tropical duty. 11–180 kW, factory-direct from Shanghai.

1.6–4.0 MPa

MID-PRESSURE
DELIVERY RANGE

± 0.1 bar

PRESSURE STABILITY
LASER-GRADE

IE5

PMV MOTOR
35% ENERGY SAVINGS

55°C

AMBIENT RATING
NO DERATING

SECTION 01 · THE AIRSPACE ENGINEERING MOAT

We Don't Build Compressors. We Engineer Uptime.

20 years of technical heritage. A 4,000 m² advanced manufacturing base in Shanghai. We deliver the “Fourth Utility” to the world's most demanding metal-fabrication and blow-moulding plants.

In PET blowing, compressed air is a process variable, not a utility. A pressure dip of a few tenths of a bar thins a PET preform wall. AirSpace mid-pressure screw compressors are built around one principle: **hold the pressure, hold the process** — twenty years of Shanghai engineering on a PMV platform tuned for high-pressure duty.

20_{yr} ENGINEERING HERITAGE	4,000_{m²} SHANGHAI FACILITY	35% ENERGY SAVINGS	7–35_d FACTORY-DIRECT DELIVERY	IP55 PROTECTION STANDARD
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Core Specs — Engineered to Endure

55°C TROPICAL AMBIENT RATING Standard on every export unit. While competitors trip their thermal protection at 40°C, AirSpace keeps your laser line running through equatorial summers and tropical heatwaves — with no derating.	IE5 PMV PERMANENT-MAGNET DRIVE Ultra-premium IE5 permanent-magnet motors deliver up to 35% energy savings versus fixed-speed units. Direct-drive integrated shaft — 100% transmission efficiency, no gearbox, no belts, no “Unload Tax.”
±0.1 BAR PRESSURE STABILITY Surgical ±0.1 bar holding keeps laser assist-air pressure dead-steady — the difference between a clean cut and a rework. Run the target lower and still hold the spec; every 1 bar reduction saves roughly 7% in energy.	7–35_d FACTORY-DIRECT STRIKE DELIVERY Bypass global port congestion with pre-cleared customs dossiers and factory-direct dispatch. IP55 protection and 304SS piping are standard industrial hardening on every export unit.

- ◆

BAOSI 5:6 asymmetric screw rotors — 15% lower internal friction for cooler, more efficient compression at high pressure.
- ◆

Direct-drive integrated shaft — motor and screw rotor share a single shaft. Transmission efficiency of 100%; zero gear or belt losses.
- ◆

IP55 protection, 304SS piping & wide-voltage tolerance (380–480V) — corrosion resistance, wash-down protection and native grid-sag handling, standard across the export fleet.

SECTION 02 · MID-PRESSURE PRECISION FOCUS

Engineered for PET Blowing.

1.6–4.0 MPa delivery. ± 0.1 bar stability. The pressure band your process actually needs.

1.6–4.0 MPa MID-PRESSURE DELIVERY · ± 0.1 BAR STABILITY

The Stable Choice for Fiber-Laser Cutting Assist Air.

Fiber laser cutting lives or dies on assist-air pressure stability. Drop below the set point and the cut line ghosts, dross builds, and the sheet is scrap; spike above it and you waste gas and distort the kerf. AirSpace mid-pressure screw compressors hold ± 0.1 bar across the full **1.6–4.0 MPa** delivery range — the surgical pressure control that turns a high-pressure air source into a process-grade instrument.

FIBER LASER CUTTING

Stable assist air at 1.6–2.5 MPa keeps the kerf clean, dross-free and dimensionally true on 24/7 sheet-metal lines. The ± 0.1 bar hold protects beam quality and cut consistency.

PET BLOW-MOULDING

High-pressure air at 3.0–4.0 MPa forms PET bottles and preforms with uniform wall thickness. Steady pressure means even material distribution and lower reject rates.

PRESSURE TESTING & TOOLS

Hydrostatic and pneumatic pressure testing, nitrogen generation feed, and heavy-duty pneumatic tool duty — the 4.0 MPa ceiling covers the most demanding high-pressure plant air needs.

Why AirSpace Is the Stable Choice — Pressure You Can Set And Forget

Mid-pressure is where most compressor lines get unstable. Push a standard 0.8 MPa unit past its design point and the airend heats, the pressure band opens, and the cut quality drifts. AirSpace mid-pressure screw compressors are **purpose-built for the 1.6–4.0 MPa band**.

- ◆ **Purpose-built high-pressure airend** — BAOSI 5:6 rotor profile tuned for mid-pressure duty, not a boosted standard unit.
- ◆ **Two-stage architecture (40 kW+)** — staged compression keeps discharge temperature low and efficiency high at 4.0 MPa.
- ◆ **PMV closed-loop control & oversized cooling** — the permanent-magnet drive trims speed in real time to hold ± 0.1 bar, with oversized aluminium cooling steady at 55°C ambient.



PMV75 MID-PRESSURE UNIT

Extreme-Climate Series — the PMV drive and high-pressure airend behind the AS-HPM fleet.

SECTION 03 · THE INTEGRATED LASER SKID

Four Systems. One Frame. Drop-In Ready.

The AS-HPM laser skid ships as a fully integrated 4-in-1 module — compressor, dryer, filter and tank on a single base frame.

01

COMPRESSOR

Mid-pressure PMV screw airend with IE5 permanent-magnet direct drive — the pressure source.

02

DRYER

High-capacity refrigerated dryer (desiccant option) that holds dew point steady for clean, dry laser assist air.

03

FILTER

4-stage precision filtration — particulate, coalescing and active-carbon stages protect the kerf and the beam path.

04

TANK

Integrated air receiver buffers demand spikes so the PMV drive holds ± 0.1 bar without hunting.



PMV-HP16 · EXTREME-CLIMATE LASER SKID

The 4-in-1 integrated module — compressor, dryer, filter and receiver on one skid. 55°C-rated, ± 0.1 bar stable, factory-direct from Shanghai.

Engineered For Laser & Blow-Moulding Plants

Fiber Laser Cutting

Sheet-Metal Fabrication

PET Blow-Moulding

Nitrogen Generation

Pressure Testing

Heavy-Duty Pneumatics

Automotive

Packaging

- ◆ **One-frame integration** — compressor, dryer, filter and tank pre-piped on a single skid. Smaller footprint, faster commissioning, single lifting point.
- ◆ **Pre-tuned for ± 0.1 bar** — the receiver, filtration and PMV control are matched at the factory so the skid holds laser-grade stability out of the box.
- ◆ **Drop-in deployment, 55°C hardened** — connect power, inlet and outlet; oversized coolers and high-static fans keep the skid stable in tropical laser shops with no derating.

SECTION 04 · TECHNICAL SPECIFICATIONS

AS-HPM Series — AS-15HPM to AS-160HPM

Mid-Pressure Screw Air Compressors · 11 kW to 180 kW · 1.6–4.0 MPa · IE5 PMV Drive

MODEL RANGE & RATED PERFORMANCE

MODEL	POWER (KW)	PRESSURE (MPA)	FAD (M³/MIN)	DIMENSIONS L×W×H (MM)	WEIGHT (KG)
AS-15HPM	11	2.5	0.9	1000 × 730 × 840	350
AS-22HPM	18.5	2.5	2.0	1160 × 800 × 1160	500
AS-37HPM	30	2.5	3.35	1250 × 950 × 1305	600
AS-55HPM	40.5	1.6–4.0	3.0–4.3	2400 × 1400 × 1600	1,200
AS-75HPM	74	1.6–4.0	2.4–6.0	2700 × 1480 × 1700	2,000
AS-90HPM	90	1.6–4.0	3.2–8.0	2850 × 1650 × 1790	2,200
AS-110HPM	110	1.6–4.0	4.0–10.0	3000 × 1750 × 1850	2,600
AS-132HPM	150	1.6–4.0	4.8–12.0	3250 × 1850 × 2000	2,800
AS-160HPM	180	1.6–4.0	6.4–16.0	3400 × 1900 × 2050	3,400

Standard conditions: inlet air at 20°C, 1 bar(a), relative humidity 0%. Models AS-15/22/37HPM are single-stage mid-pressure units rated at 2.5 MPa. Models AS-55HPM–AS-160HPM are two-stage units configurable across the full 1.6–4.0 MPa mid-pressure band; FAD is shown as a range across that band (higher flow at lower pressure, lower flow at higher pressure). All export units carry the 55°C ambient rating, IE5 PMV drive, IP55 protection and 304SS piping as standard. Custom voltage (380–480V), desiccant-dryer and integrated-skid packages on request. ±0.1 bar pressure stability is standard across the range.

Build Configuration & Standard Hardening

DRIVE IE5 PMV direct-drive, integrated shaft. No gearbox, no belts.	AIREND BAOSI 5:6 asymmetric rotors; two-stage from AS-55HPM up.	TREATMENT Refrigerated dryer + 4-stage filtration; desiccant option for low dew point.	PROTECTION IP55 enclosure, 304SS piping, 55°C ambient rating — all standard.
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±0.1 BAR PRESSURE STABILITY • STANDARD ACROSS THE RANGE

Process-Grade Pressure, Not Just “High Pressure.”

Delivering 4.0 MPa is not the hard part — **holding it steady is**. A pressure band that wanders ghosts a laser cut and thins a PET wall. Every AS-HPM unit pairs a PMV closed-loop drive with a matched receiver and oversized cooling so the band stays **±0.1 bar** under fluctuating demand, at 55°C ambient, 24/7. Run the target a fraction of a bar lower and still hold the spec — every 1 bar reduction saves roughly 7% in energy.

Model Selection & Application Guidance

- ◆ **Fiber-laser assist air (1.6–2.5 MPa):** the single-stage AS-15/22/37HPM units are the laser-cutter's workhorse — compact, ±0.1 bar stable, drop-in beside the machine.
- ◆ **High-volume laser & nitrogen generation (2.5–4.0 MPa):** the two-stage AS-55HPM–AS-160HPM units cover multi-cut-header lines and on-site nitrogen generation for cutting shops that want off-gas independence.
- ◆ **PET blow-moulding (3.0–4.0 MPa):** the 4.0 MPa ceiling of the two-stage fleet drives uniform wall thickness in bottle and preform blowing, with steady pressure for lower reject rates.
- ◆ **Pressure testing & heavy pneumatics:** the full 1.6–4.0 MPa band serves hydrostatic/pneumatic proof testing and high-force pneumatic actuation across automotive and steel plants.

Need help sizing? Send your laser model, cut pressure, daily run-hours and current kWh tariff. Our engineering department will return a model recommendation, a 3-step ROI projection and a delivered-skid quotation within one business day.

SECTION 05 · THE 3-STEP ROI AUDIT

AirSpace Pays For Itself. We Show You The Math.

Before you sign a PO, we run a 3-step audit on your actual load profile and energy tariff.

STEP 01 Baseline Audit	STEP 02 PMV Re-Design	STEP 03 Payback & TCO
01 We log your current compressor's real power draw, unload cycles and pressure band over a 7-day monitoring window — at your tariff, on your load. Output: a verified kWh baseline and the exact "Unload Tax" you pay every time your fixed-speed unit runs off-load.	02 We model the same demand on a correctly-sized IE5 PMV mid-pressure drive and compute the energy delta. The direct-drive permanent-magnet motor eliminates the Unload Tax and trims part-load losses. Output: a side-by-side kWh comparison and annual energy-saving figure.	03 We convert the energy delta into currency at your tariff, add the savings from holding a lower, steadier pressure and the integrated-skid treatment savings, and deliver a plain-English payback period. Output: months-to-payback and 5-year total cost of ownership.

VERIFIED OUTCOME

Across audited installations, AirSpace IE5 PMV mid-pressure units deliver a verified **35% energy delta versus fixed-speed** compressors — with payback typically inside 18–30 months and continuous savings thereafter. The ± 0.1 bar hold lets most plants drop the target pressure a fraction of a bar, compounding the saving at roughly 7% per bar.

SECTION 06 · THE ZERO RANSOM POLICY

No OEM Lock-In. No Parts Ransom. Ever.

You own the machine. You control the parts. You control the uptime.

ZERO RANSOM

When a competitor owns your parts supply, they own your uptime.

Too many plants discover the real cost of their compressor only at the first service interval — when a proprietary filter, a coded controller, or a “genuine-only” seal turns a routine service into a five-figure invoice and a two-week downtime event. AirSpace ends that.

- ✓ **No OEM lock-in** — serviceable consumables use industry-standard interfaces. No proprietary cartridges, no coded filters, no dealer-only seals.
- ✓ **Full technical documentation supplied** — wiring diagrams, P&ID, maintenance schedules and spare-parts list shipped with every unit.
- ✓ **Genuine spares available factory-direct** — but you are never forced to buy them. Standard parts work.
- ✓ **No remote lock-out** — the controller is yours. No OEM can brick your machine from afar.
- ✓ **Open-architecture controller** — set, read and reset parameters yourself; no dealer call-out required to change a pressure target.
- ✓ **20-year engineering heritage** — we earn the next order on uptime, not on a captive parts stream.

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Power On, Worry Off.

High-Performance Industrial Air Compression Systems

MANUFACTURING BASE

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