



PM VSD

Rotary Screw Air Compressors Nelin Series

Installed motor power 5.5 -75 Kw

Free air delivery from 0.38 to 12.25 m³/min, Pressure 7.0 - 12.5 bar



Farafan Hava Co



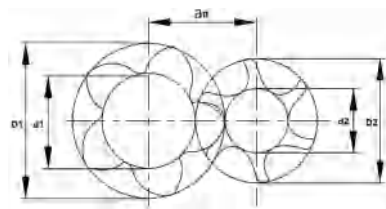
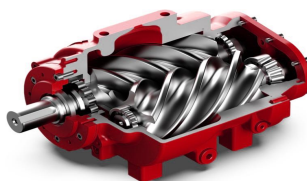
PM VSD Screw Air Compressor (5.5-75 kW)

Features and advantages



01 Air End Design Analysis

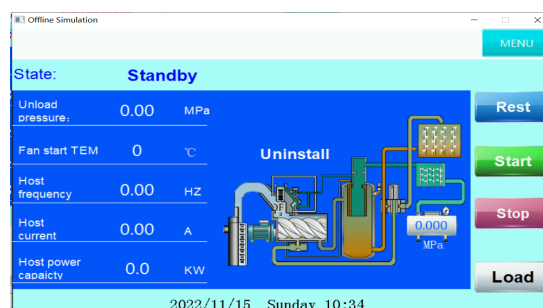
- 4 & 8 Bearing Air end Technology
- Design pressure: 5-13 bar
- Volume efficiency: $\geq 95\%$
- Transmission ratio: 1:1
- Noise level: lower
- Power consumption: ultra-low
- Rotor diameter and center distance: large
- Max. operating temperature: 110 °C continuous running
- Profile design: the third generation α model asymmetrical 5:6 tooth. Best energy efficiency



GHH Technology

02 Control Module

- RS485 communication mode transmission control signal
- Intelligent PID flow adjustment mode
- Closed-loop control, with ideal dynamic characteristics and control accuracy
- Accurately control the torque
- Fast response speed
- Constant pressure control to avoid excess energy loss



03 High Efficiency Permanent Magnetic Motor

- High Efficiency Motor IE4 & IE5
- Cooling method: oil cooling/air cooling
- No bearing design, 100% transmission efficiency
- UH series magnets, can withstand temperature up to 180 °C
- Up to 5 years durability test, 40,000 hours of durable operation without failure
- IP65, F class insulation, B grade temperature rise
- PM motor cooling structure design
- Perfectly linear output torque, low speed still retains high torque output



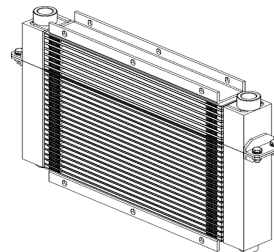
04 Inverter

- High utilization rate, removable panel, switch using, memory function
- Protection: can realize phase loss, phase-to-phase short circuit, short-circuit to ground, over-current, over-voltage, under-voltage, overload, over-heat, motor thermal protection circuit board, reinforced coating, dust and corrosion protection
- Independent cooling design, suspended installation, dust proof, corrosion proof, small heat, powerful overload and unique current limiting technology
- Proprietary and efficient control procedures
- Ultra-wide frequency design, wider control range



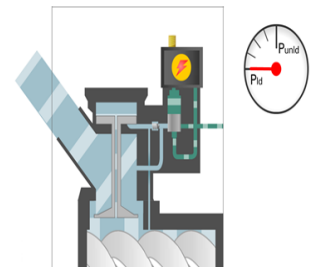
05 Cooling Fan

- Low noise
- Big capacity
- Maintenance free



06 Air Inlet Valve

- Valve seal adopts fluoro rubber
- Integrated design, failure and low maintenance rate
- Cast aluminum to avoid rust and temperature change



07 Moulded Air Filter

- Picolino module system
- Less pressure drop
- Multi-stage seal design
- High-tech, good flexibility, good resilience (polyurethane foam)
- Performance well along with the temperature changes
- Precision fit of filter element size and air filter assembly



08 Oil Filter

- Seal material: PTFE
- Working pressure up to 20 bar
- Element material: German resin wood fiber
- Working temperature can withstand 120 °C
- Separation efficiency: 50% impurity separation at 10 µm and 99% impurity separation at 30 µm



09 Oil Gas Separator

- Maximum working pressure can reach 20 bar
- Service life: 4,000Hr
- Maximum withstand pressure drop: 1.2 bar
- Efficient separation, oil content less than 3ppm
- External oil separator design, maintenance time is only take 2min



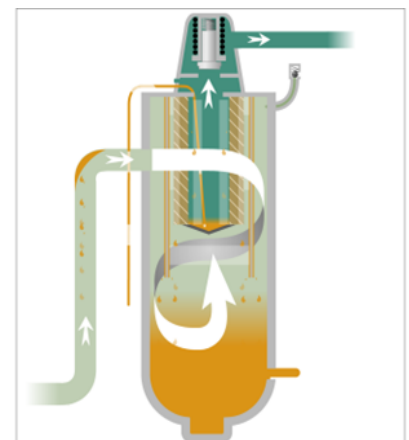
10 Stainless Steel Pipe

- Maintenance free
- 100 years service life
- Excellent corrosion resistance
- Excellent mechanical properties, superior wear resistance
- Wide range of use, long service life and low overall cost
- Can work safely for a long time at a temperature of -270°C-400°C. The material properties are quite stable.
- 304 stainless steel has a tensile strength of more than 530 N/mm, which is twice stronger of galvanized pipe, 3-4 times stronger of copper pipe, 8-10 times stronger of PPR pipe, and it has good ductility and toughness



11 Oil Gas Tank

- Air line and oil line are separated.
- Excellent separation effect, less than 3ppm of oil content.
- 3 step separation guaranty excellent separation
Reduction of pressure drops and energy costs.▪
Low oil consumption ensures minimal maintenance costs and long compressor lifetime.
- Quality air with low oil content: ▪
three step air-oil separation(centrifuge, gravity,
oil content: less than 3 ppm by weight
hinged cover for easy separator element change



Technical Parameters

Farafanhava Co

| Model | Working Pressure | | Capacity FAD* | | Power | | IP Grade *** | Noise Level** | Dimensions (mm) | | | Weight (kg) | Air Outlet Pipe Diameter | Driving Mode& Cooling Method | EEI |
|--------|------------------|--------|---------------|---------|-------|------|--------------|---------------|-----------------|------|------|-------------|--------------------------|---|------|
| | (barg) | (psig) | (m³/min) | (cfm) | (kW) | (hp) | | | (L) | (W) | (H) | | | | |
| PM-5.5 | 7.0 | 102 | 0.45-1.00 | 16-35 | 5.5 | 7.5 | IP65 | 65 | 900 | 600 | 860 | 165 | R1/2 | Direct Driven A-Air Cooling W-Water Cooling | EEI1 |
| | 8.0 | 116 | 0.44-0.95 | 16-34 | | | | | | | | | | | |
| | 10.0 | 145 | 0.38-0.76 | 13-27 | | | | | | | | | | | |
| PM-7.5 | 7.0 | 102 | 0.43-1.40 | 15-49 | 7.5 | 10 | IP65 | 65 | 900 | 600 | 860 | 180 | R1/2 | | |
| | 8.0 | 116 | 0.41-1.39 | 14-49 | | | | | | | | | | | |
| | 10.0 | 145 | 0.29-1.00 | 10-35 | | | | | | | | | | | |
| PM-11 | 7.0 | 102 | 0.60-2.16 | 21-76 | 11 | 15 | IP65 | 65 | 1050 | 650 | 900 | 205 | R3/4 | | |
| | 8.0 | 116 | 0.89-1.94 | 31-69 | | | | | | | | | | | |
| | 10.0 | 145 | 0.81-1.67 | 29-59 | | | | | | | | | | | |
| | 12.5 | 181 | 0.43-1.13 | 15-40 | | | | | | | | | | | |
| PM-15 | 7.0 | 102 | 0.80-2.73 | 28-96 | 15 | 20 | IP65 | 65 | 1100 | 650 | 920 | 315 | R3/4 | | |
| | 8.0 | 116 | 0.74-2.48 | 26-88 | | | | | | | | | | | |
| | 10.0 | 145 | 1.05-2.24 | 37-79 | | | | | | | | | | | |
| | 12.5 | 181 | 0.55-1.80 | 19-64 | | | | | | | | | | | |
| PM-18 | 7.0 | 102 | 1.01-3.38 | 36-119 | 18.5 | 25 | IP65 | 65 | 1300 | 800 | 1050 | 375 | R1 | | |
| | 8.0 | 116 | 0.98-3.27 | 35-115 | | | | | | | | | | | |
| | 10.0 | 145 | 0.88-2.95 | 31-104 | | | | | | | | | | | |
| | 12.5 | 181 | 0.74-2.57 | 26-91 | | | | | | | | | | | |
| PM-22 | 7.0 | 102 | 1.82-3.95 | 64-139 | 22 | 30 | IP65 | 65 | 1300 | 800 | 1050 | 420 | R1 | | |
| | 8.0 | 116 | 1.81-3.84 | 64-136 | | | | | | | | | | | |
| | 10.0 | 145 | 1.67-3.39 | 59-120 | | | | | | | | | | | |
| | 12.5 | 181 | 0.88-3.00 | 31-106 | | | | | | | | | | | |
| PM-30 | 7.0 | 102 | 2.63-5.51 | 93-195 | 30 | 40 | IP65 | 67 | 1400 | 900 | 1200 | 500 | R1-1/2 | | |
| | 8.0 | 116 | 1.56-5.40 | 55-191 | | | | | | | | | | | |
| | 10.0 | 145 | 1.36-5.30 | 48-187 | | | | | | | | | | | |
| | 12.5 | 181 | 2.09-3.51 | 74-124 | | | | | | | | | | | |
| PM-37 | 7.0 | 102 | 2.07-6.74 | 73-238 | 37 | 50 | IP65 | 67 | 1400 | 900 | 1200 | 550 | R1-1/2 | | |
| | 8.0 | 116 | 3.43-6.45 | 121-228 | | | | | | | | | | | |
| | 10.0 | 145 | 2.95-5.88 | 104-208 | | | | | | | | | | | |
| | 12.5 | 181 | 1.42-4.78 | 50-169 | | | | | | | | | | | |
| PM-45 | 7.0 | 102 | 2.51-7.16 | 89-288 | 45 | 60 | IP65 | 67 | 1500 | 960 | 1200 | 580 | R1-1/2 | | |
| | 8.0 | 116 | 2.38-7.00 | 84-282 | | | | | | | | | | | |
| | 10.0 | 145 | 3.63-6.38 | 128-225 | | | | | | | | | | | |
| | 12.5 | 181 | 1.62-5.33 | 57-188 | | | | | | | | | | | |
| PM-55 | 7.0 | 102 | 4.44-9.81 | 157-382 | 55 | 75 | IP55 | 73 | 1800 | 1200 | 1400 | 1045 | Rp2 | | |
| | 8.0 | 116 | 5.10-9.30 | 180-364 | | | | | | | | | | | |
| | 10.0 | 145 | 4.83-8.44 | 171-333 | | | | | | | | | | | |
| | 12.5 | 181 | 3.94-7.67 | 139-271 | | | | | | | | | | | |
| PM-75 | 7.0 | 102 | 5.32-12.25 | 188-468 | 75 | 100 | IP55 | 73 | 1800 | 1200 | 1400 | 1325 | Rp2 | | |
| | 8.0 | 116 | 6.44-12.14 | 227-464 | | | | | | | | | | | |
| | 10.0 | 145 | 5.71-11.59 | 202-409 | | | | | | | | | | | |
| | 12.5 | 181 | 3.69-9.44 | 130-333 | | | | | | | | | | | |

*)FAD in accordance with ISO 1217:2009, Annex C: Absolute intake pressure 1 bar (a), cooling and air intake temperature 20

**) Noise level as per ISO 2151 and the basic standard ISO 9614-2, operation at maximum operating pressure and maximum speed; tolerance: ±3 dB(A)

****) Air cooled type motors IP23 and oil cooled IP 55 & IP 64

Specifications are subject to change without notice.



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