



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



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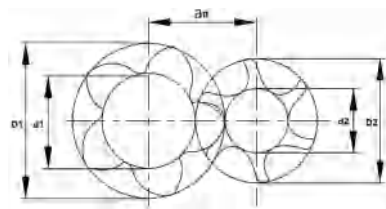
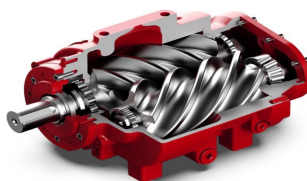
PM VSD Screw Air Compressor (5.5-75 kW)

Features and advantages



01 Air End Design Analysis

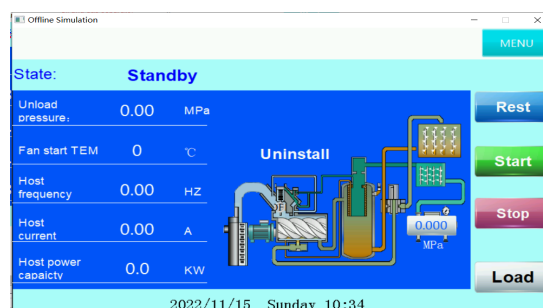
- 4 & 8 Bearing Air end Technology
- Design pressure: 5-13 bar
- Volume efficiency: $\geq 95\%$
- Transmission ratio: 1:1
- Noise level: lower
- Power consumption: ultra-low
- Rotor diameter and center distance: large
- Max. operating temperature: 110 °C continuous running
- Profile design: the third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

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- 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



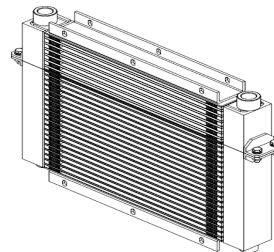
04 Inverter

- 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



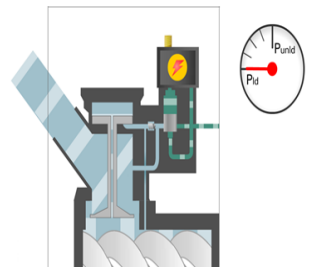
05 Cooling Fan

- 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

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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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