

# Rotary Screw Air Compressor - EPM Series Variable Speed Drive

18.5kw - 110kw / 25 - 150 hp  
High Efficiency-Permanent Magnetic Drive



*The Air of Trust*



## Anest Iwata Motherson

Anest Iwata Motherson (AIM) is a joint venture between Anest Iwata Corporation, Japan and Motherson Group, India. Anest Iwata Corporation is one of the global leaders in Air Compressors and Vacuum Pumps with more than 9 decades of inspiring history of technological excellence.

Anest Iwata Motherson is committed to delight its customers by ensuring supply of the best quality products, supported with effective after sales services at optimum value. The company has two state-of-the-art manufacturing facilities and a wide network of sales and service centres spread across India.

## Anest Iwata Inspiring History

Second Facility in Greater Noida



**2000**  
**Anest Iwata Motherson**  
**Established**



**1991**  
**World's First Oil Free Scroll**  
**Air Compressor Launched**

**1993**  
**World's first Oil Free Scroll**  
**Vacuum Pump Launched**

**1928**  
**First Reciprocating**  
**Compressor**  
**Manufactured**

**1984**  
**World's first Oil Free**  
**Reciprocating Compressor with**  
**"Seize Free Technology"**  
**Launched**

**1977**  
**Screw Air compressor**  
**Launched**

**1926**  
**Established**  
**In Japan**



**2015**  
**MEGASY Series**  
**Medical Air & Vacuum Units Launched**

**2013**  
**Reciprocating Vacuum**  
**Pump Launched in India**

**2012**  
**Oil Free Claw**  
**Air Compressor Launched**

**2005**  
**Braking Compressor for**  
**Indian Railways Launched**

**2004 World's**  
**first Oil Free Booster**  
**Compressor Launched**



**2010**  
**Second Facility Inaugurated**  
**in Greater Noida (India)**

**2018**  
**Screw Air Compressor**  
**Sales Started in India**

**2017**  
**Electric Bus**  
**Compressor Launched**

**2019**  
**Rotary Vane**  
**Vacuum Pump Launched**





## Unique Benefits of the EPM Series:

### • Save up to 40% of Power

- Compared to an equivalent fixed speed compressor

### • Pay-Back in as little as 1-2 years

- The more your air demand fluctuates, the faster the pay back

### • More Air per Kilowatt

- New oversized compression Airend gives you more air
- So efficient you may be able to use a lower KW Compressor

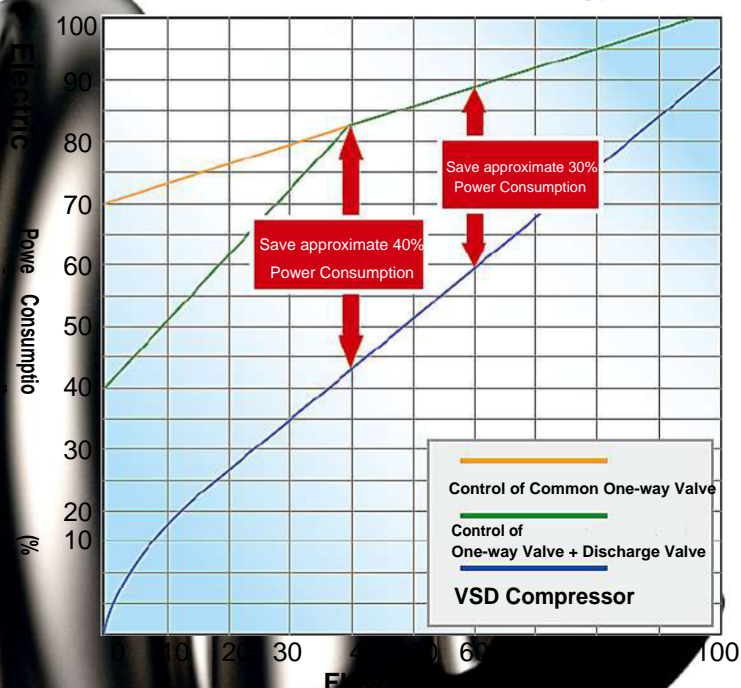
### • No Offload Running

- When compressor is up to pressure it stops with no offload running

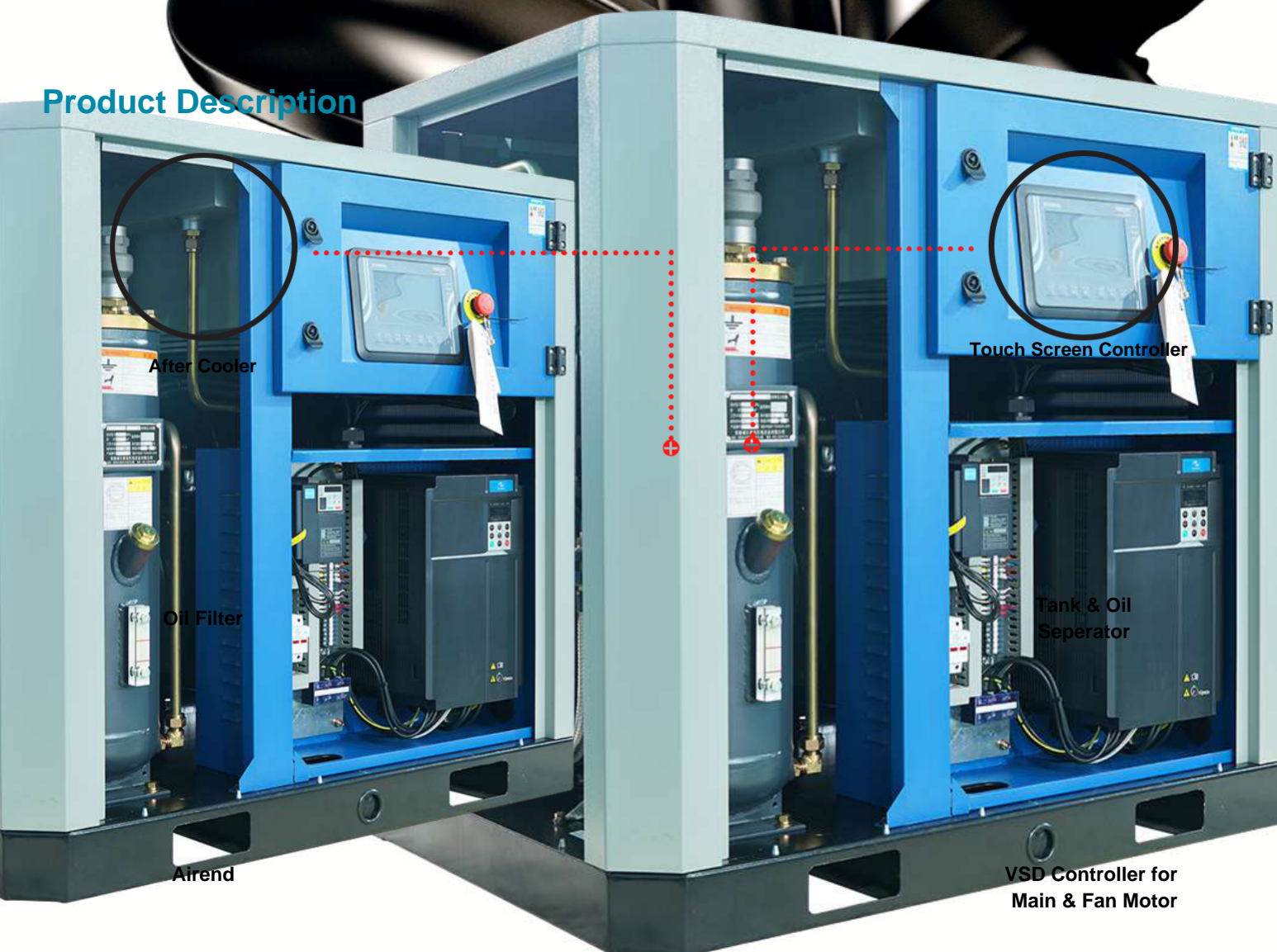
### • Low RPM

- Average of 40 - 50% lower max RPM than our competitors

## Reduce 30%~40% energy



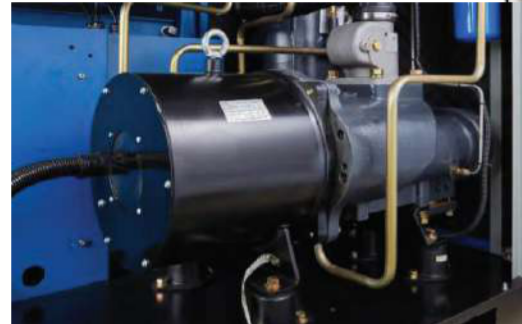
## Product Description





# Anest Iwata EPM Series Permanent Magnet Drive Features

## Oversized High Efficiency Airend



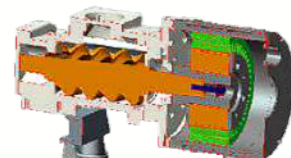
- On average 40-50% lower max RPM than our competitors
- Increased efficiency by 5-10%
- Large oversized rotors for low rotational speed
- Asymmetric rotor profile for increased sealing between rotors
- Triple lip shaft seals
- Dual back to back taper rolling bearings
- Oil seal leak recovery system

## High Efficiency IPM Motor

- Soft start on main and fan motor
- Variable range of 30-100%
- No off load running
- Can dramatically reduce running hours & power consumption
- Direct Drive (1:1 ratio) – eliminates gearing or transmission losses

## Special Dual Housing Oil-Cooled Motor

The Airend lubricant also cools the motor in a design in which the two housings are incorporated into one, with space left for an oil channel between the inner & outer housing. This design helps cool the motor more efficiently than the traditional air cooling fan system and reduces power consumption. The Airend and motor use a simple morse connection which is easy for installation and dismantlement



## Energy saving features:

- Oversized low RPM, high efficiency Airend
- Highest IPM motor efficiency, Better than 3 efficiency levels.
- Superior VSD control technology for main & fan motor
- Energy saving touch screen controller



## Variable Speed Drive (VSD) Inverter



The Advance inverter has a massive 30-100% variable range which converts AC to DC to control the new IPM motor. According to your air consumption the inverter will automatically adjust the IPM motor to suite your air demand while keeping a stable pressure of 0.1bar. The fan motor also has its own individual VSD feature which modulates the fan speed to keep a constant temperature.

## Energy Saving Touch Screen Controller

- 7 inch colour screen with button and touch panel
- Operation screen readings for pressure/ temperature/ power/ frequency/ run hours/compressor status
- Day time scheduling on/off and pressure (4 different times/pressure allowed per day) to maximize savings
- Master slave operation (Maximum of 16 compressors)
- Stop start remote
- Service intervals/ alarm
- Date and Time
- Fault history
- Monitoring alarms
- Support MODBUS RTU protocol



## Steel & Copper Resistant



- High-flow, leak-proof design.
- Steel piping (with high-flow characteristics)
- Eliminates oil pressure losses and the risk of rupture through the normal ageing of traditional flexible, rubber hoses
- All joints & hoses employ a combination of O-rings and compression rings to offer a leak-free operation.

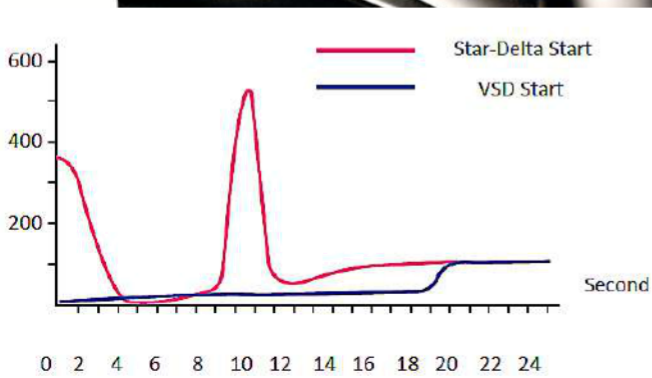
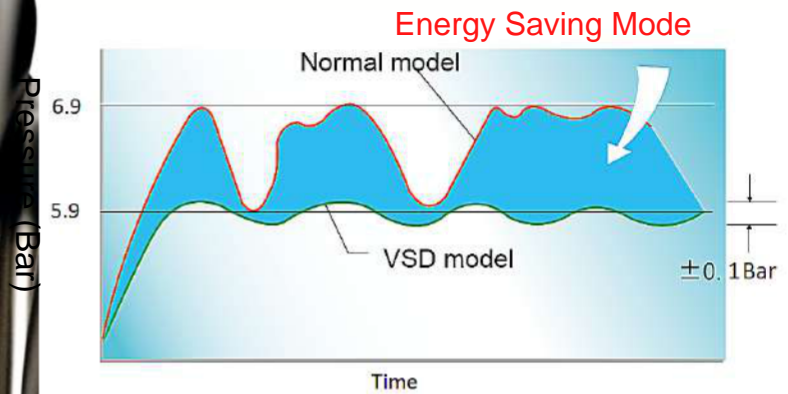
*The Air of Trust*



## Advantages of EPM Series Screw Compressor

### Keeps Constant Air Supply

- The compressor keeps  $\pm 0.1$  bar constant pressure of air supply under the required pressure.
- With big air demand, the pressure keeps constant and the rotating speed complements to ensure air demand.
- With small air demand, the pressure keeps constant and the rotating speed decreases to satisfy sufficient air demand.



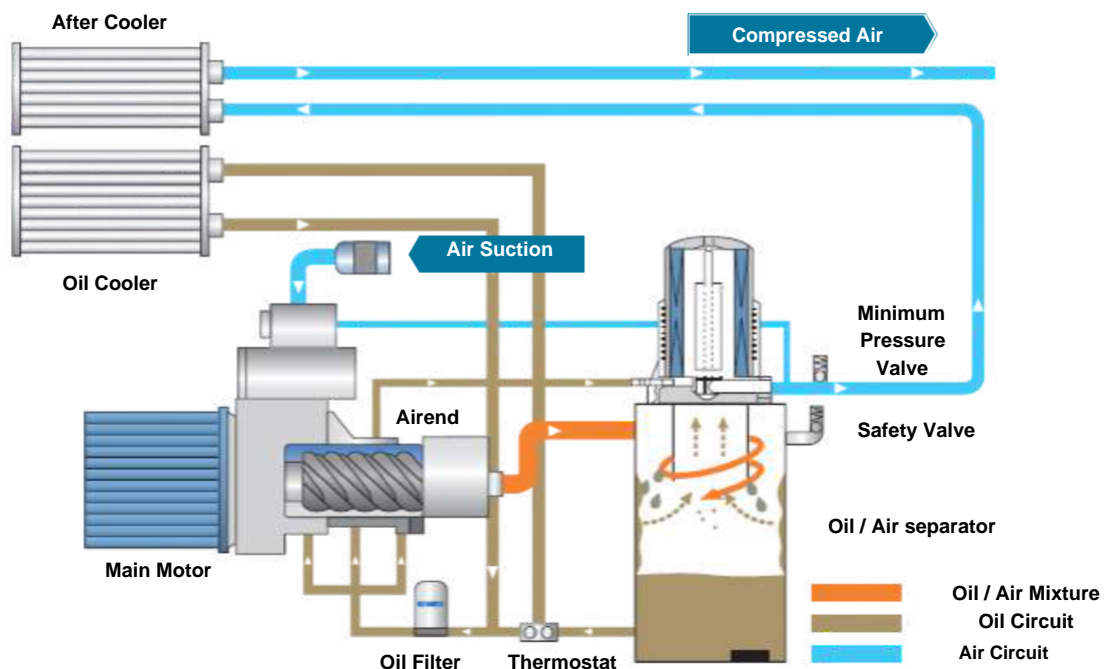
### Variable speed soft start, less impact to the power grid

- Variable speed soft start eliminates the peak current when starting; a smooth start can reduce the power supply, equipment costs, as well as the impact on the power grid.

### VSD-Permanent Motor Efficiency

- The Interior Permanent Magnet (IPM) motor uses DC power via inverter to speed up and slow down the compressor to match your air demands. Once up to pressure, it can run with no offload running. AC induction motors found on most VED compressors are limited the number of times they can start, and therefore, cannot match the efficiency of the IPM motor. The IPM motor has a limited start-stop ability which can dramatically reduce both total cost of ownership and power consumption.

## System diagram





## Technical Specifications

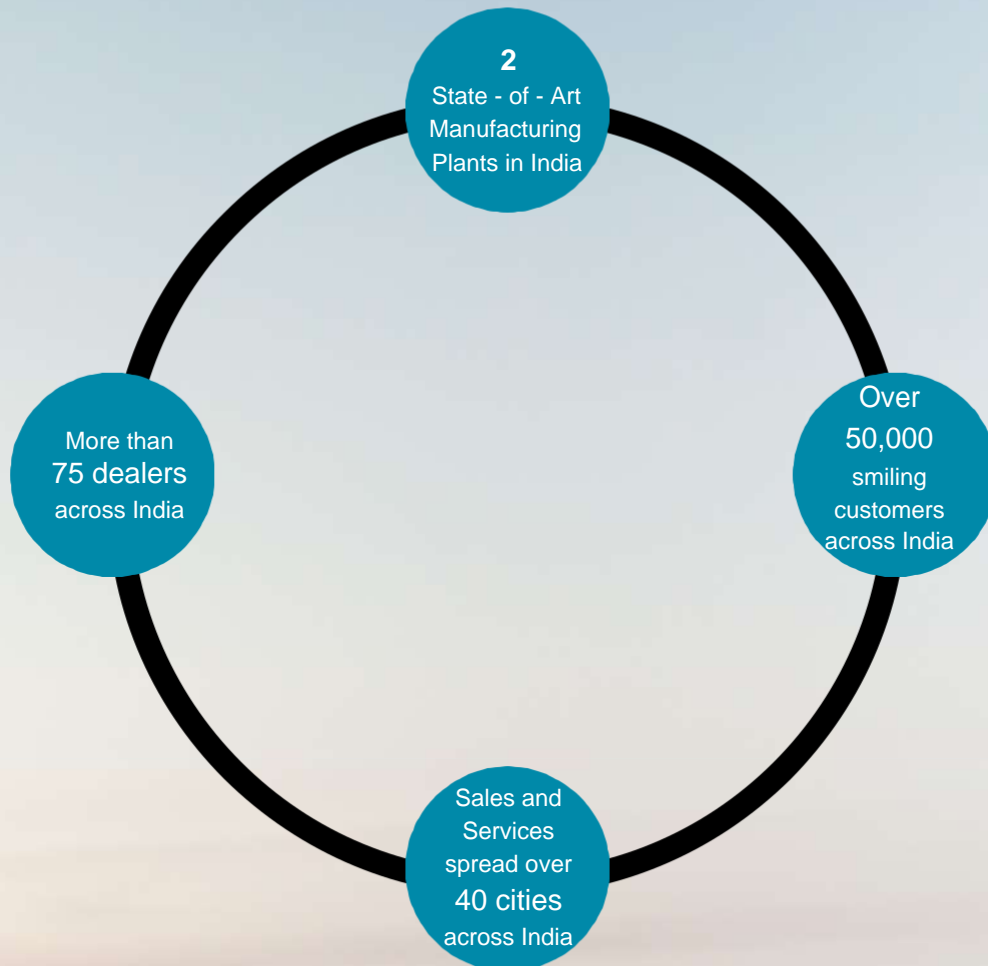
Model	Power		Capacity		Pressure	Dimensions	Weight	Noise level	Outlet
	Kw	HP	m3/min	CFM	Bar	mm	Kg	at 1m	Size
AIM 25 EPM-7	18.5	25	0.98 - 3.7	35 - 131	7	1200 x 800 x 1100	480	68 ± 3dB	R 1
AIM 25 EPM-8			0.93 - 3.5	33 - 124	8				
AIM 25 EPM-10			0.73 - 2.9	26 - 102	10				
AIM 30 EPM-7	22	30	1.2 - 4.1	42 - 145	7	1200 x 800 x 1100	560	66 ± 3dB	R 1
AIM 30 EPM-8			1.2 - 4.0	42 - 141	8				
AIM 30 EPM-10			1.1 - 3.5	39 - 124	10				
AIM 40 EPM-7	30	40	1.86 - 6.2	66 - 219	7	1300 x 950 x 1370	830	68 ± 3dB	R1 1/2
AIM 40 EPM-8			1.83 - 6.1	65 - 215	8				
AIM 40 EPM-10			1.3 - 5.2	46 - 184	10				
AIM 50 EPM-7	37	50	2.2 - 7.3	78 - 258	7	1300 x 950 x 1370	850	69 ± 3dB	R1 1/2
AIM 50 EPM-8			2.16 - 7.2	76 - 254	8				
AIM 50 EPM-10			1.58 - 6.3	56 - 222	10				
AIM 60 EPM-7	45	60	2.35 - 9.4	82 - 332	7	1300 x 1030 x 1520	890	70 ± 3dB	R1 1/2
AIM 60 EPM-8			2.33 - 9.3	82 - 328	8				
AIM 60 EPM-10			2 - 8	71 - 283	10				
AIM 75 EPM-7	55	75	3.4 - 11.3	120 - 399	7	2300 x 1350 x 1500	1300	76 ± 3dB	RC 2
AIM 75 EPM-8			3.3 - 11	117 - 388	8				
AIM 75 EPM-10			2.63 - 10.5	93 - 371	10				
AIM 90 EPM-7	63	90	3.81 - 12.7	135 - 449	7	2300 x 1350 x 1500	1800	76 ± 3dB	RC 2
AIM 90 EPM-8			3.75 - 12.5	132 - 441	8				
AIM 90 EPM-10			3.01 - 12.3	106 - 434	10				
AIM 110 EPM-7	75	100	4.86 - 16.3	172 - 576	7	2900 x 1620 x 1692	2800	75 ± 3dB	DN65
AIM 110 EPM-8			4.8 - 16	170 - 565	8				
AIM 110 EPM-10			4.1 - 13.7	145 - 484	10				
AIM 125 EPM-7	90	125	5.45 - 20.6	192 - 727	7	2900 x 1620 x 1692	2900	77 ± 3dB	DN65
AIM 125 EPM-8			4.9 - 19.6	173 - 692	8				
AIM 125 EPM-10			4.72 - 17.1	167 - 604	10				
AIM 150 EPM-7	110	150	7.2 - 24	254 - 848	7	2800 x 1750 x 1692	3250	77 ± 3dB	DN65
AIM 150 EPM-8			9-23	318 - 812	8				
AIM 150 EPM-10			6-20	212 - 706	10				

### Note :

- Standard Voltage is 400V/50Hz
- Free Air Delivery (FAD) is measured as per ISO 1217 Annexure C
- All performance parameters are as per JIS (Japanese Industrial Standards)
- All standard models are air-cooled
- Vertical Air Tanks are available from 500 to 5000 liters
- Standalone Refrigerated Air Dryers, Heatless Air Dryers, Oil Removal Filters, Auto Drain Valves are also available



## We are closer than you think!



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ISO-9001

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