



**ATH 2804 MT, DN 250 ISO-F,
water-cooled, heated, with
integrated drive electronics**

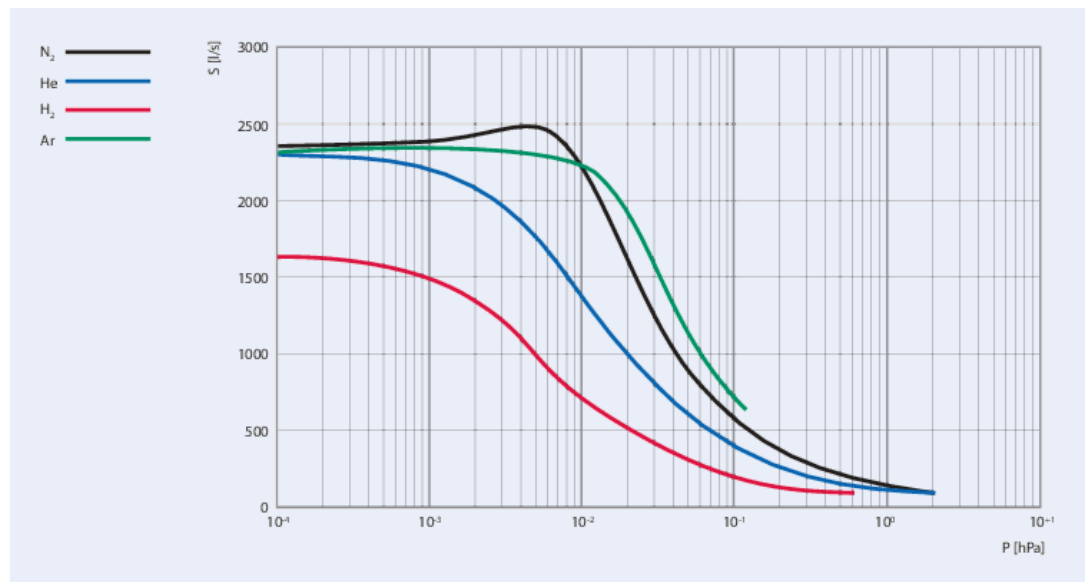




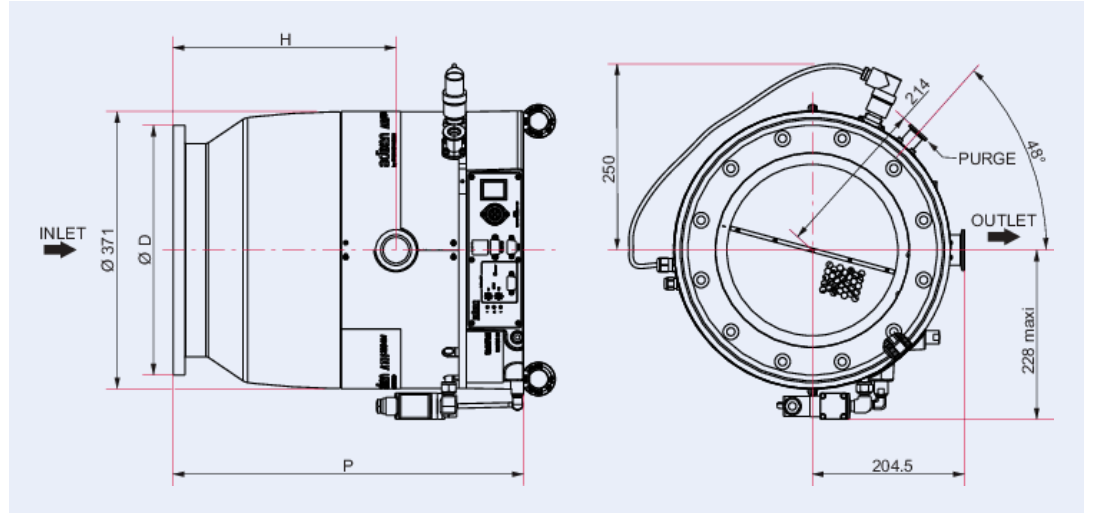
ATH 2804 MT, DN 250 ISO-F, water-cooled, heated, with integrated drive electronics

- 5-axis magnetically levitated turbopump with drag stage for a pump speed of up to 2350 l/s for N₂
- Connection flange DN 250 ISO-F
- Integrated electronic drive unit
- Installation in any orientation
- Remote, water cooled, non-heated
- CE marked and ROHS compliant

Characteristics



Dimensions



Technical Data	ATH 2804 MT, DN 250 ISO-F, water-cooled, heated, with integrated drive electronics
Leakage current max.	<3.5 mA
Type of electronic drive unit installation	Integrated electronic drive unit
Rotation speed at stand-by, min.	15,000 rpm
Rotation speed at stand-by, max.	25,000 rpm
Power consumption in stand-by mode, min.	560 W
I/O interfaces	Remote
Cooling method	Water
Protection degree	IP54
Pumping speed	5 940 – 8 460 m ³ /h
Motor type	1-phase motor
Pumping speed category	2 800 l/s
Set point: Temperature max.	85 °C
Set point: Temperature min.	55 °C
Switch-point: Temperature	55 – 85 °C
Cooling water temperature, max	25 °C
Cooling water temperature, min	15 °C
N ₂ sealing gas flow	0.05 slpm (0 °C)
Rotation speed in stand-by mode	15 000 – 25 000 rpm
Pumping speed for He	2,300 l/s
Pumping speed for N ₂	2,350 l/s
Sound pressure level	<45 dB(A)
Typical vibration displacement (at inlet flange 10-1000 Hz)	0.01 μm
Power consumption at ultimate pressure	590 W
Vacuum range max	1 · 10 ⁻⁸ hPa
Vacuum range min	1 · 10 ⁻⁸ hPa
I/O interfaces	Remote
Cooling water temperature	15 – 25 °C
Pumping speed for Ar	2,350 l/s
Pumping speed for H ₂	1,650 l/s
Input voltage 50 Hz	200 – 240 V
Input voltage 60 Hz	200 – 240 V
Input voltage(s)	200 – 240 V AC, 50/60 Hz
Sound pressure level	<45 dB(A)
Sound pressure level	<45 dB(A)
Power consumption at final pressure	590 W

Gas throughput for N ₂	47.3 hPa·l/s
Run-up time	<8 min
Compression ratio for Ar	>1 · 10 ⁹
Compression ratio for H ₂	4.9 · 10 ³
Compression ratio for He	9 · 10 ⁴
Compression ratio for N ₂	>1 · 10 ⁹
Inlet pressure max. for Ar	0.01 hPa 0.008 Torr 0.01 mbar
Inlet pressure max. for N ₂	0.04 hPa 0.03 Torr 0.04 mbar
Maximum stray current	<3.5 mA
Rotation speed in stand-by mode, max.	25,000 rpm 25,000 min ⁻¹
Rotation speed in stand-by mode, min.	15,000 rpm 15,000 min ⁻¹
Cooling water flow, max.	60 l/h
N ₂ sealing gas flow min.	50 sccm (0 °C)
N ₂ sealing gas flow, max.	50 sccm (0 °C)
Switch-point: Temperature max.	85 °C 185 K -188 °F
Switch-point: Temperature min.	55 °C 131 K -218 °F
Cooling water flow, min.	60 l/h
Cooling water temperature, max	25 °C 77 K -248.15 °F
Cooling water temperature, min	15 °C 59 K -258.15 °F
Pumping speed, max.	8,460 m ³ /h 4,979.56 cfm 141,002.82 l/min
Fore-vacuum max. for N ₂	3 hPa 2.25 Torr 3 mbar
Fore-vacuum max. for Ar	3.7 hPa 2.78 Torr 3.7 mbar
Pumping speed for He	2,300 l/s
Pumping speed for N ₂	2,350 l/s
Typical oscillation train (at inlet flange 10-1000 Hz)	0.01 µm
Pumping speed, min.	5,940 m ³ /h 3,496.28 cfm 99,001.98 l/min
Rotation speed max.	25,000 rpm 25,000 min ⁻¹
Pumping speed for Ar	2,350 l/s
Pumping speed for H ₂	1,650 l/s
Inlet pressure max. for Ar	0.01 hPa
Inlet pressure max. for N ₂	0.04 hPa
Cooling water flow, max.	60 l/h
N ₂ sealing gas flow min.	50 sccm (0 °C)
N ₂ sealing gas flow, max.	50 sccm (0 °C)
Cooling water flow, min.	60 l/h
Rotation speed	≥ 25 000 rpm
Compression ratio for N ₂	>1 · 10 ⁹
Compression ratio for H ₂	4.9 · 10 ³
Compression ratio for He	9 · 10 ⁴

Compression ratio for Ar	>1 · 10 ⁹
Run-up time	<8 min
Gas throughput for N ₂	47.3 hPa·l/s
Gas throughput for Ar	25.3 hPa·l/s
Fore-vacuum max. for N ₂	3 hPa
Fore-vacuum max. for Ar	3.7 hPa
Cooling water flow	60 l/h
Power consumption max.	1,200 W
03 Vacuum range	High Vacuum Ultra-high Vacuum
Rotation speed max.	25,000 rpm
Pumping speed category max.	2,800 l/s
Compression ratio	1 · 10 ⁹
Connection flange (in)	DN 250 ISO-F
Connection flange (out)	DN 40 50 ISO-KF

Order number	ATH 2804 MT, DN 250 ISO-F, water-cooled, heated, with integrated drive electronics
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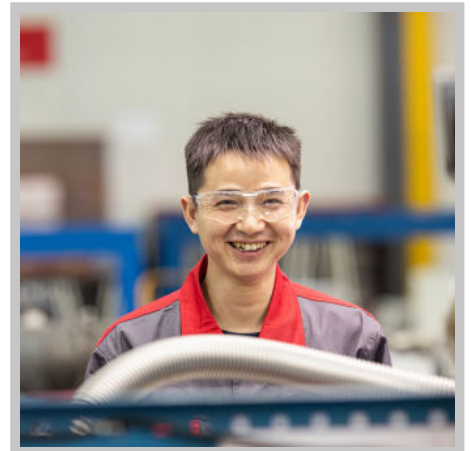
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