

ATH 1600 MT/1603 M

Turbomolecular vacuum pumps

PFEIFFER 
VACUUM+FAB SOLUTIONS

Part of the **BUSCH** GROUP



Maintenance-free

No wearing parts thanks to magnetic bearing technology, reduced particle contamination or build-up of residue in MT version

Flexible

Compatible with a variety of backing pumps, MT version with integrated heating system for demanding chemical conditions, frequency-controlled direct current (DC) motors

Quiet

Low noise and vibration levels, perfectly suited for vibration-sensitive applications in semiconductor manufacturing processes and analytical instrumentation

Accessories, spare parts and options

- Installation kit
- Cooling water valve
- Purge gas valve
- Handheld remote controller
- Inlet protection screen
- Heater unit
- Valve cable and coil
- Various inlet flange types
- Various user interfaces
- Temperature management system for corrosive process
- Air cooling system

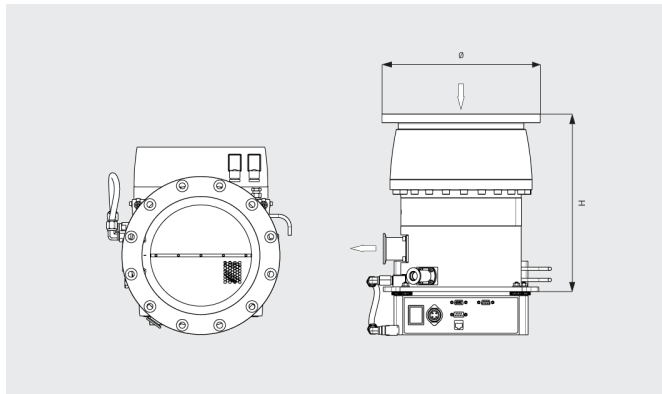
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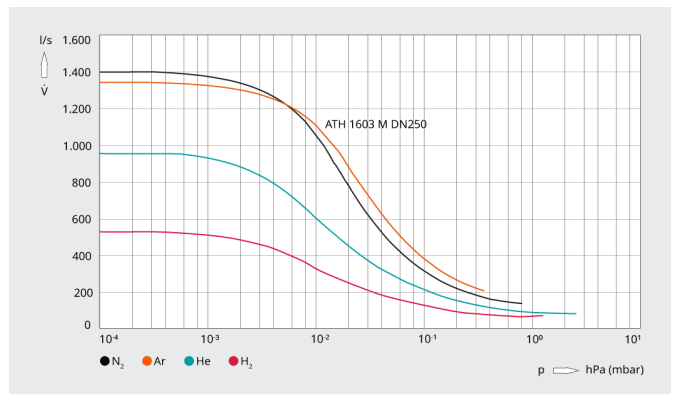
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Dimensional drawing



Pumping speed



	ATH 1600 MT	ATH 1603 M
Pumping speed N ₂	1360-1400 l/s	1360-1400 l/s
Pumping speed Ar	1280-1350 l/s	1280-1350 l/s
Pumping speed He	940-970 l/s	940-970 l/s
Pumping speed H ₂	540 l/s	540 l/s
Compression ratio (ISO 5302) N ₂	$> 1 \cdot 10^8$ l/s	$> 1 \cdot 10^8$ l/s
Compression ratio (ISO 5302) Ar	$> 1 \cdot 10^8$ l/s	$> 1 \cdot 10^8$ l/s
Compression ratio (ISO 5302) He	$4 \cdot 10^3$ l/s	$4 \cdot 10^3$ l/s
Compression ratio (ISO 5302) H ₂	$5 \cdot 10^2$ l/s	$5 \cdot 10^2$ l/s
Ultimate pressure	$< 6 \cdot 10^{-9}$ mbar	$< 6 \cdot 10^{-9}$ mbar
Max. forevacuum N ₂	2.2 mbar	1.7 mbar
Max. forevacuum Ar	3.2 mbar	2.5 mbar
Max. forevacuum He	1.6 mbar	1.2 mbar
Max. forevacuum H ₂	0.3 mbar	0.3 mbar
Max. inlet vacuum N ₂	0.015 mbar	0.6 mbar
Max. inlet vacuum Ar	0.008 mbar	0.026 mbar
Max. inlet vacuum He	-	> 0.6 mbar

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Max. inlet vacuum H ₂	-	> 0.6 mbar
Gas throughput at final rotational speed N ₂	1000 sccm	4000 sccm
Gas throughput at final rotational speed Ar	500 sccm	1200 sccm
Gas throughput at final rotational speed He	> 1000 sccm	> 4000 sccm
Gas throughput at final rotational speed H ₂	> 1000 sccm	> 4000 sccm
Recommended purge flow rate	50 sccm	50 sccm
Rotational speed	39000 rpm	39000 rpm
Rotational speed variable	15000 rpm to nominal speed	15000 rpm to nominal speed
Run-up time up to 90% of final rotational speed, with pressure exhaust < 0.1 mbar	< 6 min	< 6 min
Controller power supply	200-240 V, 50/60 Hz Single-phase	200-240 V, 50/60 Hz Single-phase
Max. power consumption for start-up	650 W	650 W
Nominal power (stand-by power)	200 W	200 W
Max. heating temperature	75 °C	n/a
Max. baking temperature	120 °C	120 °C
Recommended cooling water flow rate	60 l/h	60 l/h
Cooling water temperature	15-40 °C	15-40 °C
Remote controller type	Magpower	Magpower
Recommended backing pump	ADP/ADS	ADP/ADS
Sound pressure level (ISO 2151) 1m distance at nominal speed	< 48 dB(A)	< 48 dB(A)
Vibration level at nominal speed	< 0.01 µm	< 0.01 µm
Dimensions (Ø x H)	305 x 317.2-327.5* mm	305 x 317.2-327.5* mm
Weight approx.	34 kg	34 kg
Controller weight approx.	8.7 kg	8.7 kg
Gas inlet / outlet	DN 200, DN 250 / DN 40 ISO-KF	DN 200, DN 250 / DN 40 ISO-KF
N ₂ purge flange	DN 16 ISO-KF	DN 16 ISO-KF
Stainless steel inlet screen (factory setting)	yes	yes

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Permissible magnetic field (radial value) at 10 cm	< 12 mT	< 12 mT
On-board control option	Profibus, Remote	Profibus, Remote

* depending on flange variant

DO YOU WANT TO KNOW MORE?

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