

# A3H range

Dry pumps for harsh duty applications



**INCREASE YOUR TOOL UPTIME**

## Robust design for increased lifetime

Based on field proven Series 2 dry pumps, A3H range is designed to meet the latest 300mm CVD process challenges for 45 nm and below technology nodes.

Covering a wide range of pumping capacity, A3H range is capable to operate at higher inlet flows. Powder and by-product handling has been improved, increasing maintenance intervals and reducing unscheduled tool downtime.

Strong & robust design doesn't necessarily mean high running costs: Alcatel multi-stage roots technology used on A3H range is the perfect compromise for such harsh CVD environment, providing extended lifetime while featuring moderate power consumption.

## Features

- Field proven multi-stage roots technology
- Robust design for powder handling
- High flows compatible
- Optimized temperature control and purge dilution
- Corrosion resistant
- Moderate power consumption
- Low noise
- Low vibration
- CE & Semi S2 - 0706 compliant

## Benefits

- High reliability for extended lifetime
- Reduced CoO
- Compatible with Semiconductor Fab requirements

## Applications

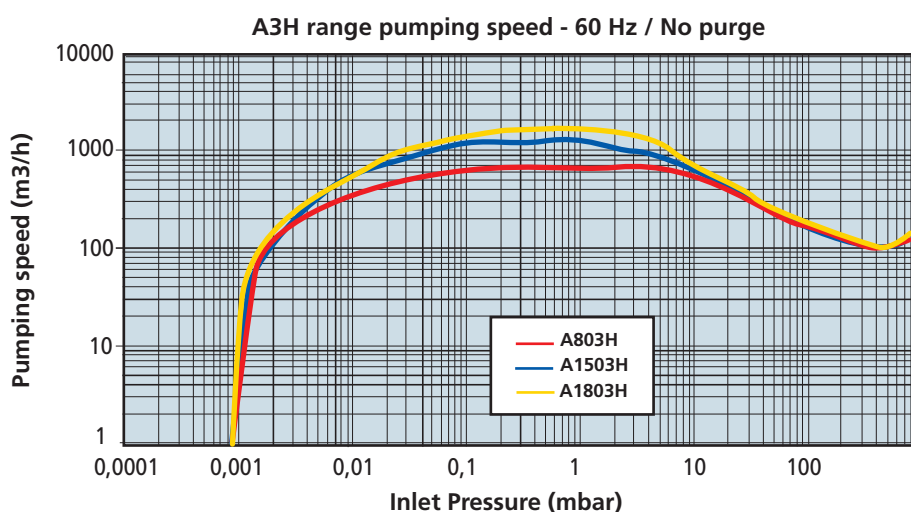
- All Semiconductor harsh applications such as:
  - PECVD
  - SACVD
  - LPCVD
  - ALD
  - MOCVD

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## Technical Specifications

Description		Units	A803H	A1503H	A1803H
Peak pumping speed	60 Hz	m <sup>3</sup> /h / cfm / l/mn	700 / 412 / 11667	1300 / 765 / 21667	1700 / 1000 / 28333
Ultimate pressure Max	(No Purge) 60 Hz	mbar / torr	9 10 <sup>-4</sup> / 6.7 10 <sup>-4</sup>	9 10 <sup>-4</sup> / 6.7 10 <sup>-4</sup>	9 10 <sup>-4</sup> / 6.7 10 <sup>-4</sup>
Ultimate pressure Max	(50 SLM Purge) 60 Hz	mbar / torr	6 10 <sup>-3</sup> / 4.5 10 <sup>-3</sup>	6 10 <sup>-3</sup> / 4.5 10 <sup>-3</sup>	6 10 <sup>-3</sup> / 4.5 10 <sup>-3</sup>
Power consumption at ultimate pressure	60 Hz	kW	2.4	2.8	3.3
motor rating		kW	4.3	6.5	6.5
Peak pumping speed	50 Hz	m <sup>3</sup> /h / cfm / l/mn	600 / 350 / 10000	1150 / 670 / 19200	1650 / 970 / 2750
Ultimate pressure Max	(No Purge) 50 Hz	mbar / torr	2 10 <sup>-3</sup> / 1.5 10 <sup>-3</sup>	2 10 <sup>-3</sup> / 1.5 10 <sup>-3</sup>	2 10 <sup>-3</sup> / 1.5 10 <sup>-3</sup>
Ultimate pressure Max	(50 SLM Purge) 50 Hz	mbar / torr	9 10 <sup>-3</sup> / 6.7 10 <sup>-3</sup>	9 10 <sup>-3</sup> / 6.7 10 <sup>-3</sup>	9 10 <sup>-3</sup> / 6.7 10 <sup>-3</sup>
Power consumption at ultimate pressure	50 Hz	kW	2.1	2.5	2.9
motor rating		kW	4.3	6.5	6.5
Power supply			LV: 208/220 V 3 phases 50/60 Hz HV: 380/480 V 3 phases 50/60 Hz		
Max continuous inlet flow		SLM	100	100	100
Max exhaust overpressure		mbar / Torr		1200 / 900	
N2 purge flow		SLM		15 to 120	
Cooling water, Quick connectors			1/4" NPT	1/4" NPT	1/4" NPT
Cooling water (min)		l/mn / gal/mn	1 / 0.26	1.3 / 0.34	1.5 / 0.39
Inlet connection		ISO-K/KF		DN100	
Outlet connection		ISO-KF		DN40	
Dimensions	Lenght	mm/inches	834 / 32.8	998 / 39.3	998 / 39.3
	Width	mm/inches	390 / 15.4	390 / 15.4	390 / 15.4
	Height to inlet flange	mm/inches	883 / 34.8	986 / 38.8	986 / 38.8
Weight		kg / lbs	395 / 870	552 / 1217	560 / 1235
Max sound level		dBA	< 68	< 69	< 69

## Performances



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