



Edwards EXT-200/200H

Technical Specifications

Parameter	EXT200/200H and Hi	EXT200/200H GCMS [†]	EXT 200/200H ICPMS	Notes
Mass	9 kg (7.5 kg [†])	9 kg	9 kg	mass without controller controller
Side inlet-flange	DN100ISO	DN100ISO	DN100ISO	
Main inlet-flange	DN100ISO	DN100ISO	DN100ISO	
Outlet-flange	DN25NW	DN25NW	DN25NW	
Vent-port	1/8 inch BSP	1/8 inch BSP	1/8 inch BSP	
Interstage-port (optional)	DN25NW	DN25NW	DN25NW	
Main inlet pumping speed				
N ₂ ^{‡**}	177 l s ⁻¹	155 l s ⁻¹	107 l s ⁻¹	Pb < 5 mbar (500 Pa)
He ^{‡**}	190 l s ⁻¹	185 l s ⁻¹	113 l s ⁻¹	Pb < 1 mbar (100 Pa)
H ₂ ^{‡**}	163 l s ⁻¹	175 l s ⁻¹	102 l s ⁻¹	Pb < 0.5 mbar (50 Pa)
Ar ^{‡**}	-	153 l s ⁻¹	104 l s ⁻¹	Pb < 0.2 mbar (20 Pa)
Side inlet pumping speed				
N ₂ ^{‡**}	155 l s ⁻¹	155 l s ⁻¹	155 l s ⁻¹	Pb < 5 mbar (500 Pa)
He ^{‡**}	131 l s ⁻¹	179 l s ⁻¹	187 l s ⁻¹	Pb < 1 mbar (100 Pa)
H ₂ ^{‡**}	79 l s ⁻¹	131 l s ⁻¹	143 l s ⁻¹	Pb < 0.5 mbar (50 Pa)
Ar ^{‡**}	-	127 l s ⁻¹	148 l s ⁻¹	
Interstage pumping speed				
N ₂ [‡]	8.75 l s ⁻¹	N/A	N/A	Pb = 5 mbar (500 Pa)
He [‡]	10.4 l s ⁻¹	N/A	N/A	Pb = 5 mbar (500 Pa) P _i = 5 x 10 ⁻¹ mbar (50 Pa)
Compression ratio from the backing port to the main inlet				
N ₂	>5 x 10 ⁷	>5 x 10 ^{7††}	>5 x 10 ^{7††}	
He	1 x 10 ⁶	1 x 10 ⁷	2.5 x 10 ⁷	
H ₂	3.5 x 10 ⁴	-	5 x 10 ⁵	
Ar	-	>5 x 10 ^{7‡‡}	>5 x 10 ^{7‡‡}	
Compression ratio from the side inlet to the main inlet				
N ₂	6 x 10 ³	1 x 10 ⁴	9 x 10 ³	
He	6 x 10 ²	1.5 x 10 ²	2.5 x 10 ²	
H ₂	2 x 10 ¹	3.3 x 10 ¹	6 x 10 ¹	
Ar	-	1.7 x 10 ⁴	7 x 10 ³	



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Technical Specifications cont.

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Maximum backing pressure ^{***}				
N ₂	12.6 mbar (1260 Pa)	7.3 mbar (730 Pa)	-	
He	7.7 mbar (770 Pa)	-	-	
H ₂	2 mbar (200 Pa)	-	-	
Ar		-	8 mbar (800 Pa)	
Minimum backing pump displacement	0.6 m ³ h ⁻¹	0.6 m ³ h ⁻¹	0.6 m ³ h ⁻¹	
Maximum continuous inlet pressure - water-cooling at 35 °C ^{†††}				No water cooling on GCMS and ICPMS.
Main inlet	2.5 x 10 ⁻³ mbar (2.5 x 10 ⁻¹ Pa)			
Side inlet	5 x 10 ⁻³ mbar (5 x 10 ⁻¹ Pa)			
Maximum continuous inlet pressure - air-cooling at 35 °C ambient ^{†††}				Air-cooling is beneficial to the EXDC controller. Nitrogen unless otherwise stated.
Main inlet	3 x 10 ⁻³ mbar (3 x 10 ⁻¹ Pa)	5 x 10 ⁻³ mbar (He: 7.5 x 10 ⁻³ mbar)	1 x 10 ⁻² mbar (Ar: 5 x 10 ⁻³ mbar)	
Side inlet	9 x 10 ⁻³ mbar (9 x 10 ⁻¹ Pa)	1.5 x 10 ⁻² mbar (He: 5 x 10 ⁻³ mbar)	1 x 10 ⁻² mbar (Ar: 5 x 10 ⁻³ mbar)	
Operating attitude	Vertical and upright through to horizontal ±2 °	Vertical	Vertical	
Nominal rotational speed	60000 r min ⁻¹	60000 r min ⁻¹	60000 r min ⁻¹	
Standby rotational speed	42000 r min ⁻¹	42000 r min ⁻¹	42000 r min ⁻¹	EXC controller only



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Technical Specifications cont.

Parameter	EXT200/200H and Hi	EXT200/200H GCMS*	EXT 200/200H ICPMS
Starting time to 90% speed			
EXDC160	110 sec	120 sec	150 sec
EXC100E	190 sec		
EXC100L			245 sec
EXC120	130 sec		
EXC300	100 sec		120 sec
EXDC80		270 sec	330 sec
Cooling method	Forced-air/ water		
Ambient air temperature (forced-air cooling)	0 - 35 °C	0 - 35 °C	0 - 35 °C
Water temperature (water-cooling)	10 - 20 °C	-	-
Noise level (at 1 metre)	< 50 dB(A)	< 50 dB(A)	< 50 dB(A)
Recommended controller	EXDC160	EXDC160	EXDC160
EXDC160 maximum VA input	250 VA	250 VA	250 VA
Quiescent power	25 W	40 W	40 W
Recommended backing pump ^{###}	RV3	RV3	RV3

* The data shown for EXT200/200H GCMS applies to pumps: B75640991, B75641991, B75642991, B75643991 and B75644991. This is because these pumps have the same internal components and the data is taken without inlet screens fitted.

† Mass applies to products listed under the Declaration of Incorporation.

‡ Pb = backing pressure, Pi inlet pressure,

*** Pumping speeds are without inlet-screen or inlet-strainer (EXT200/200Hi, GCMS and ICPMS). Inlet-screens and inlet-strainers reduce speed by approximately 10%.

†† This is a measured value. Theoretical value $>10^9$ and $>10^{11}$ respectively for GCMS and ICPMS.

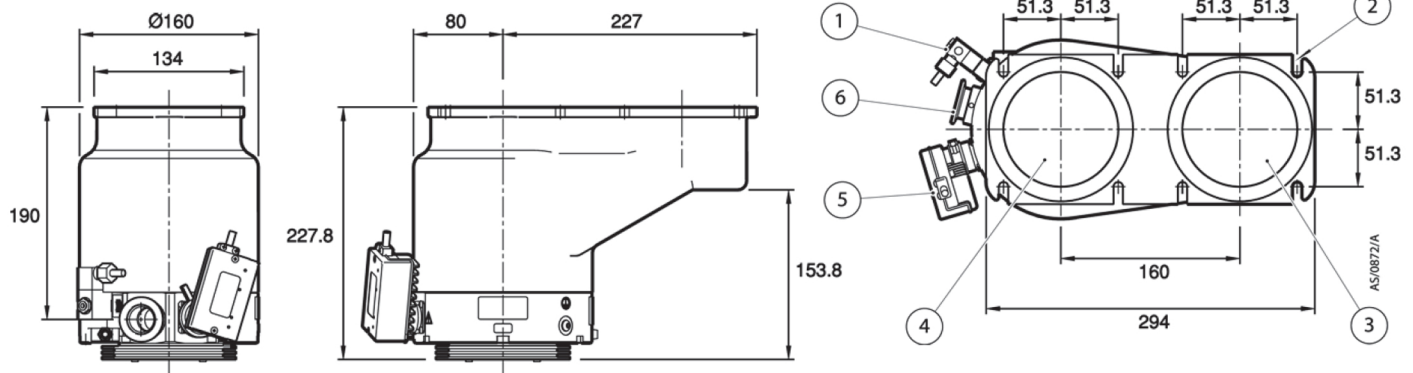
‡‡ Theoretical values 2×10^9 and 7×10^{11} respectively.

‡‡‡ Inlet pressure has risen to 10^{-3} mbar.

††† Above this pressure, rotational speed drops below nominal.

‡‡‡ A larger backing pump may be required for maximum throughput.

Dimensions



1. TAV5 vent valve
2. 8 slots 8.4 mm wide
3. Side inlet
4. Main inlet
5. EXDC controller
6. Backing port