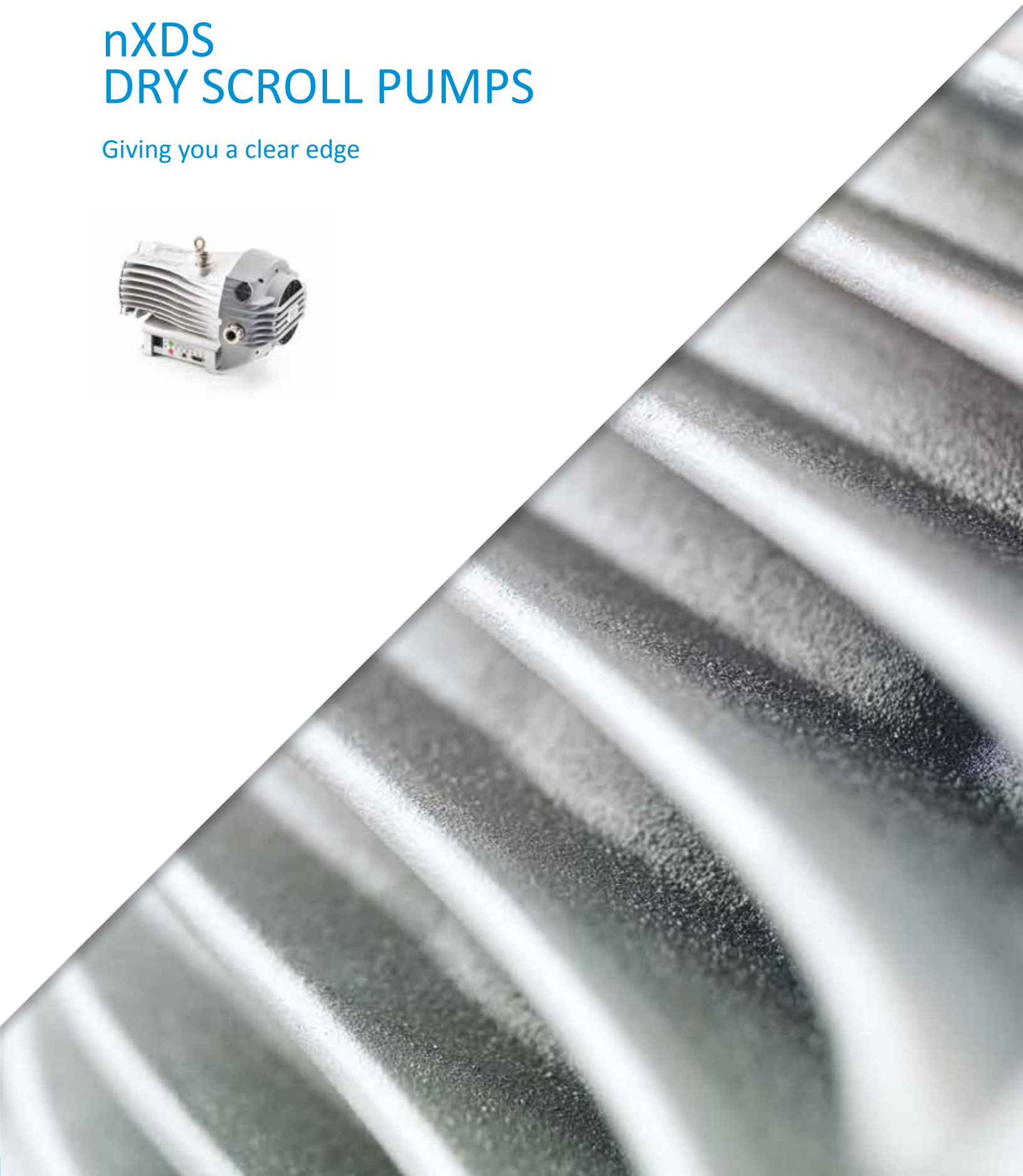


nXDS DRY SCROLL PUMPS

Giving you a clear edge





EDWARDS THE PARTNER OF CHOICE

Edwards is a world leader in the design, technology and manufacture of vacuum pumps with over 95 years' history and more than 75 years' manufacturing experience.

Edwards believes in delivering results that bring value to our customers by using our breadth of industry experience to identify and apply solutions to your problems. Using the most innovative and up-to-date modelling techniques, we can optimise the pumping configuration for customers to provide a system design giving the maximum performance in the most reliable and cost-effective way.

THE INTELLIGENT CHOICE

Edwards nXDS is the great new shape of dry vacuum pumping

The nXDS has taken scroll vacuum technology to the next level. Improved performance, exceptional pumping capability, quiet operation and extended service intervals make nXDS the ultimate dry choice.

Quiet operation

Better working environment

Hermetically sealed for a lubricant-free vacuum environment

Contamination free process and no oil to dispose of

Low power consumption

Low cost of ownership

Intelligent and easy to use controls

Flexibility of operation

Superior vapour handling

Wider range of applications

Long service intervals

Maximised up-time

Applications

You can be assured Edwards has the application expertise and vacuum solution to meet your needs

Mass spectrometry

- GCMS, LCMS, ICPMS, MALDI, RGA, surface science, leak detectors

Electron microscopy

- TEM, SEM, sample coatiers

Sample preparation

- Gel dryers, glove boxes, rotary evaporators, centrifuges

Research and development

- Chamber evacuation, coating systems, turbopump backing

High energy physics

- Beam lines, accelerators, mobile pump carts, turbopump backing, laser evacuation

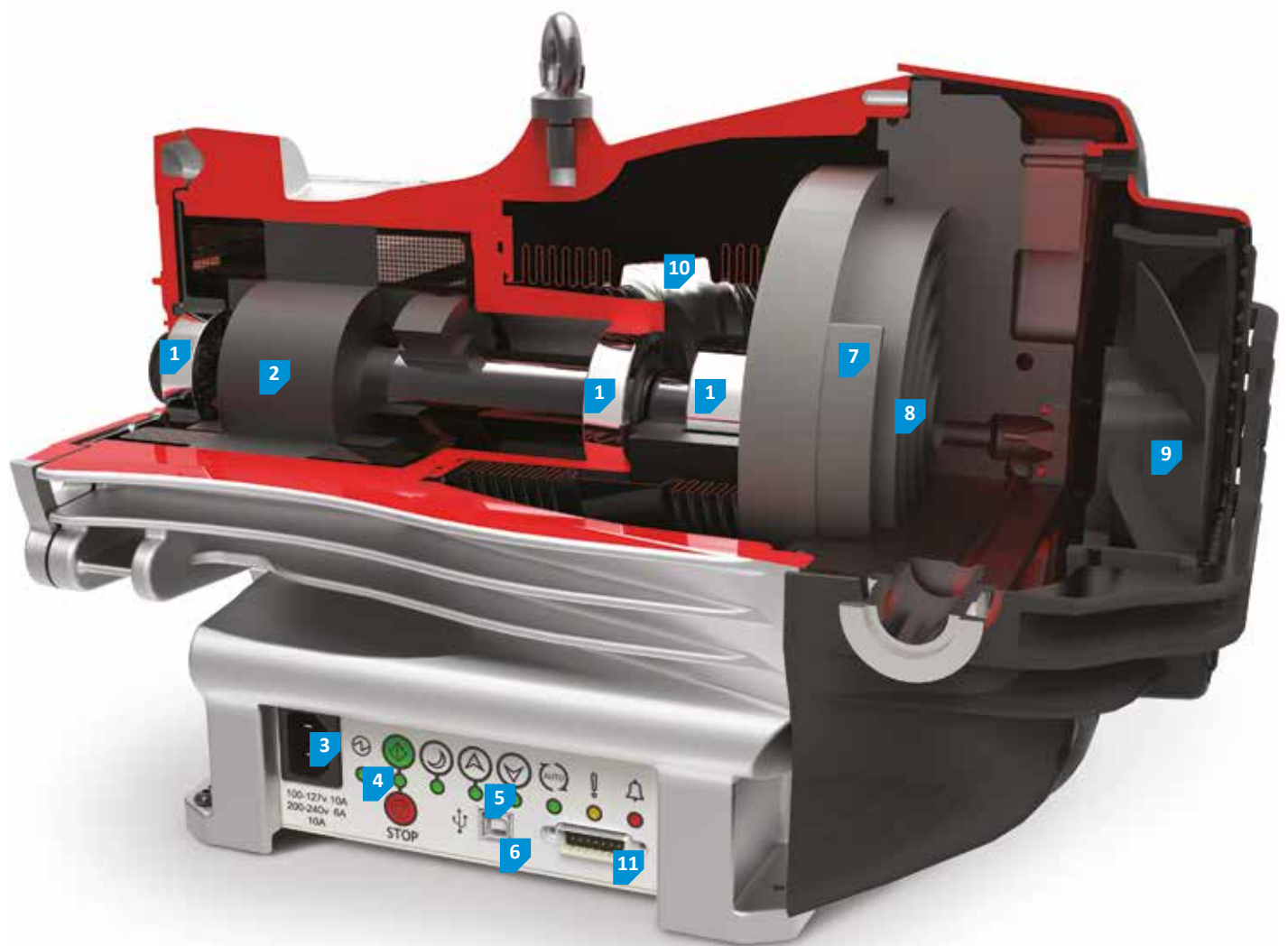
Industrial

- Gas recovery and recirculation, glove boxes, brake line and air conditioning evacuation, coating systems, freeze drying, gas bottle filling/emptying, refrigeration system manufacture, degassing/curing (oil, epoxy resin)

Chemical

- Gel dryers, glove boxes, rotary evaporators, centrifuges, solvent recovery, distillation/extraction/filtration

nXDS scroll pump sectional view



1 Optimum bearing placement for long lifetime and easy replacement

2 High efficiency radial air-gap motor for low power consumption

3 Wide range voltage input with automatic selection for simple operation

4 Easy to use manual control buttons

5 Standby speed control buttons for efficient process tuning

6 USB port for service use only

7 Optimised scroll profiles for each model to maximise performance

8 Advanced tip-seal technology for long service lifetime

9 Thermally controlled fan for reduced noise

10 Hermetic bellows sealing for contamination free vacuum

11 Remote control interface for convenience of operation



Performance

nXDS has been designed to combine the latest advances in scroll technology with an intelligent inverter drive coupled with the long established, truly dry, hermetically sealed mechanism of the XDS series.

Class leading pumping speeds are an improvement over existing XDS models and, with the inverter drive, are of course consistent worldwide. Likewise, ultimate vacuum pressures which are below 10^{-2} mbar are now comparable with those of oil-sealed rotary vane pumps – without the inconvenience of oil.

Hermetic sealing ensures that the vacuum environment is not contaminated by bearing lubricant and, conversely, the bearings are not contaminated by any process gas being pumped.

Quiet running

The modern laboratory is often a busy place with many other appliances running, all contributing to the background noise. With its low noise power level of 52 dB(A), the nXDS pump makes only a very small contribution to the total noise. This level is up to twenty times less than those of competitor products.

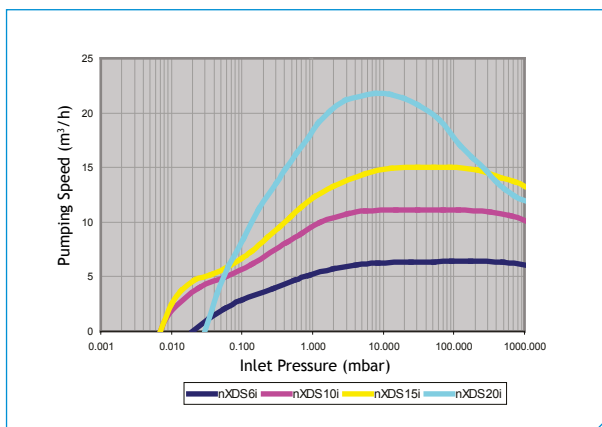
nXDS is available in four sizes:

- nXDS6i
- nXDS10i
- nXDS15i
- nXDS20i

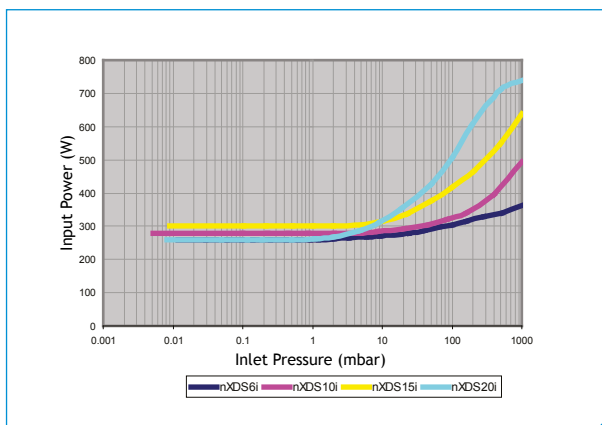
Other variants

For more aggressive applications, 'C' Variants are available which feature Chemraz® internal valves and stainless steel fittings for extra protection from the pumped media.

R variants are available for specialist applications such as gas recirculation, rare gas pumping and recovery or other applications where the dilution of the pumped gas is undesirable, or where sealing is integral to minimising potential gas loss.



Summary of pump speeds



Summary of input powers

Pump controller

The advanced controller allows for several modes of control:

Manual

Push button START, STOP and STANDBY. Accurate speed control of 1% of maximum running speed.

Parallel remote

From your own control system via the 15 way d-sub connector giving the same START, STOP and STANDBY with the option of analogue speed control.

Serial communication remote

Option of either RS232 or RS485 with a choice of Edwards' proprietary 'DX' protocol or industry standard Modbus protocol. A USB port has been included for service use only.

The pump controller is able to accept voltages from 100-127 and 200-240V (+/- 10%) without the need for intervention.



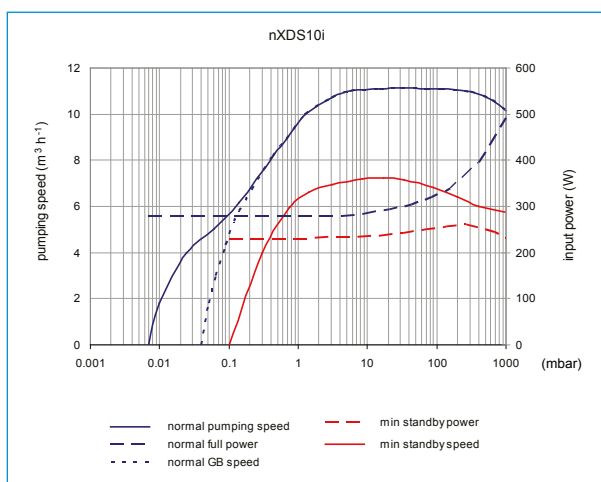
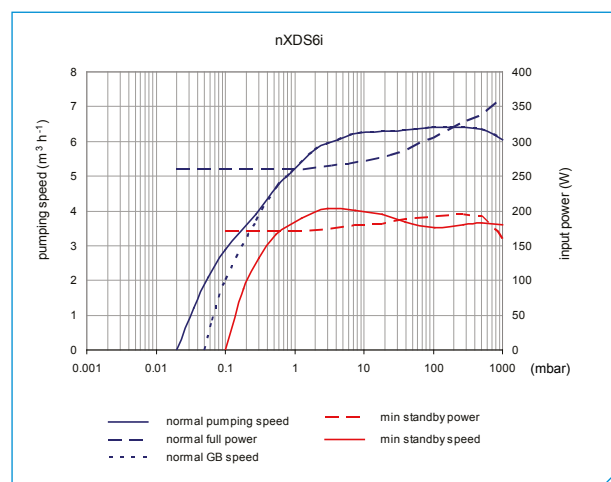
Technical data

		nXDS6i	nXDS10i	nXDS15i	nXDS20i
Nominal rotational speed		1800 rpm			
Displacement	m ³ h ⁻¹ (ft ³ min ⁻¹)	6.8 (4.0)	12.7 (7.5)	17.1 (10.1)	28.0 (16.5)
Peak pumping speed	m ³ h ⁻¹ (ft ³ min ⁻¹)	6.2 (3.6)	11.4 (6.7)	15.1 (8.9)	22.0 (13.0)
Ultimate vacuum (total pressure)	mbar (Torr)	0.020 (0.015)	0.007 (0.005)	0.007 (0.005)	0.030 (0.022)
Minimum standby rotational speed	rpm	1200			
Speed control resolution (percentage of full rotation speed)	%	1			
Max inlet pressure for water vapour	mbar	35	35	35	20
Max water vapour pumping rate	gh ⁻¹	110	145	280	220
Maximum continuous inlet pressure	mbar	200	200	200	50
Voltage input	V	100-127, 200-240 (+/-10%)			
Voltage frequency	Hz	50/60			
Motor power 1-ph*	W	260	280	300	260
Power connector 1-ph		IEC EN60320 C13			
Recommended fuse		10A, 250Vac rms			
Weight	kg (lb)	26.2 (58)	25.8 (57)	25.2 (56)	25.6 (56)
Inlet flange		NW25			
Exhaust flange		NW25			
Noise level**	dB(A)	52			
Vibration at inlet flange	mms ⁻¹ (rms)	< 4.5			
Leak tightness (static)	mbar ls ⁻¹	< 1x10 ⁻⁶			
Operating temperature range	°C (°F)	+10 C to +40 (+41 to +104)			

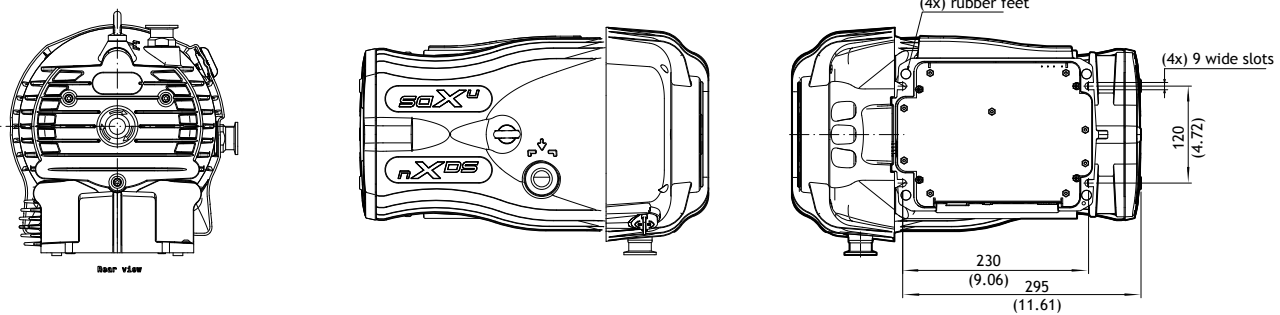
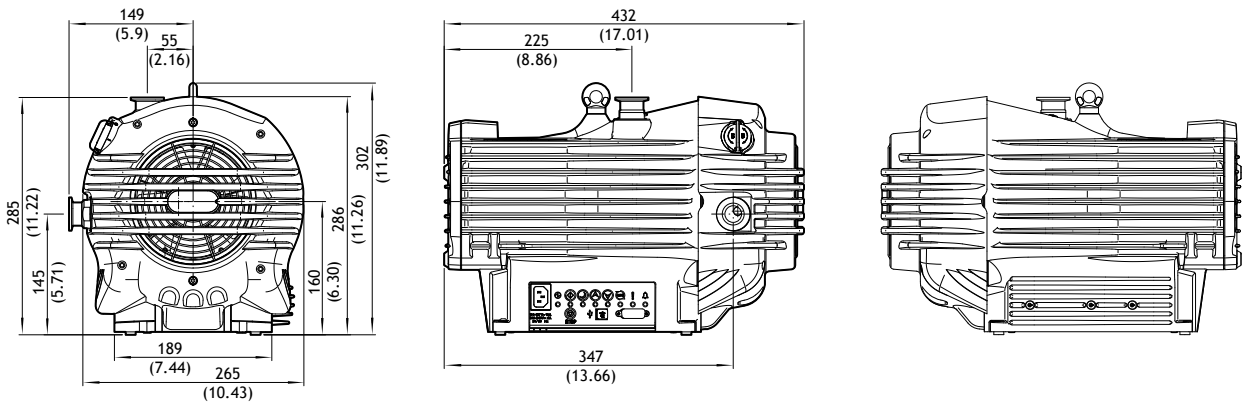
* Typical. See graphs on page 6.

** For low fan speed, typical at ultimate end when load/ambient conditions allow.

Pumping speed and power curves



Dimensions



All variants are the same
Dimensions in mm (in)

