

nEXT 240, 300 and 400 TURBOMOLECULAR PUMP

edwardsvacuum.com

The nEXT240, nEXT300 and nEXT400 are innovative pumps, providing compact, high-vacuum performance where flexibility is key. With a range of variants to choose from they have been designed to meet the needs of OEM's, scientific research as well as UHV applications.

nEXT240, nEXT300 and nEXT400 are available in two variants:

'D' pump variant combine turbo and drag stages

'T' pump variant includes Edwards unique fluid dynamic stages, with the option for additional booster ports where increased system rationalisation is needed.

Split Flow variants are also available in three sizes where additional for further optimisation of your vacuum system.

Designed for use in UHV and analytical applications, the 'A' variant is also an option for the nEXT300 and nEXT400 pumps. These models employ a Holweck design, improving light gas compression ratios as well as backing pump pressure tolerances, and making them the go to choice for UHV environments.

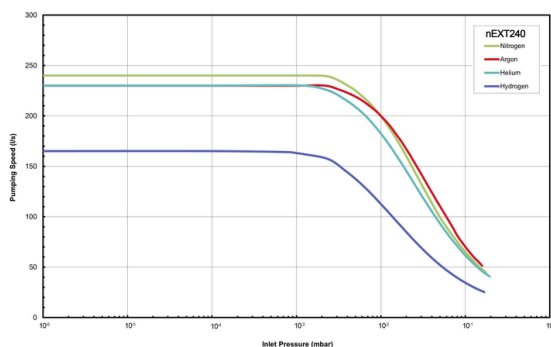


FEATURES AND BENEFITS

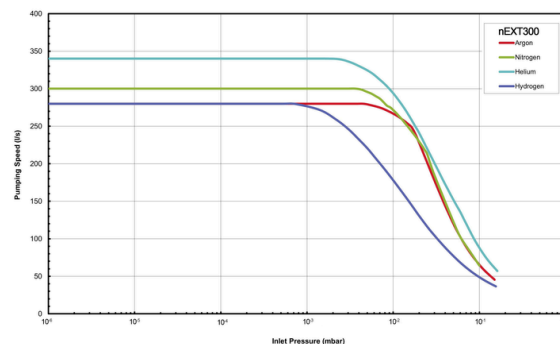
- Replaceable bearing assembly and oil cartridge
- Low power consumption and standby mode
- Compact design ideal for high product density environments
- Range of variants available for tailor made and flexible deployment
- Edwards patented direct impeller temperature measurement technology for increased operating envelope
- Compatible with Edwards nST software for monitoring, and range of communications protocols
- Full suite of accessories

Performance Curve

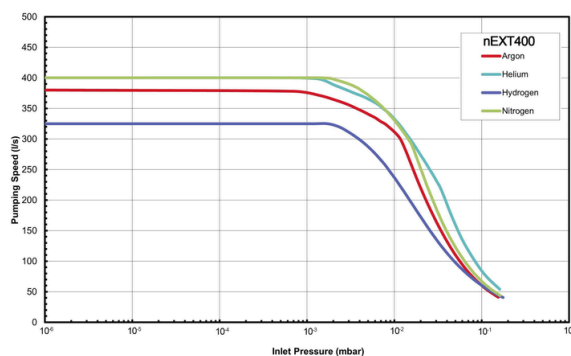
nEXT240



nEXT300

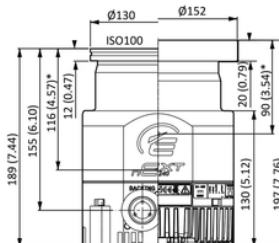
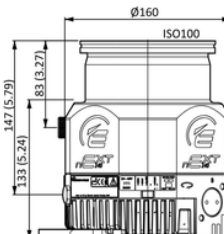
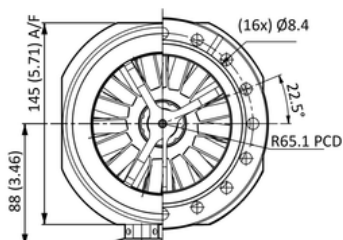


nEXT400

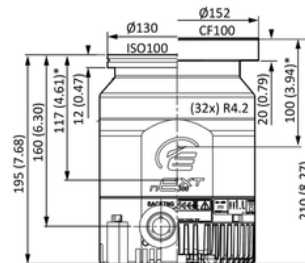
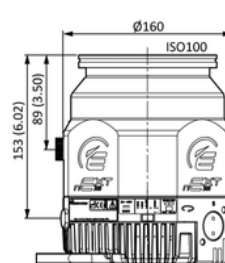
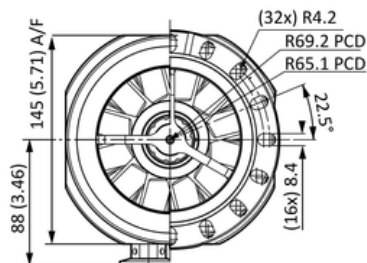


DIMENSIONAL DRAWING

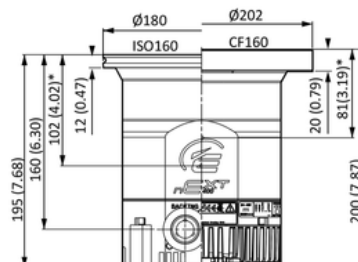
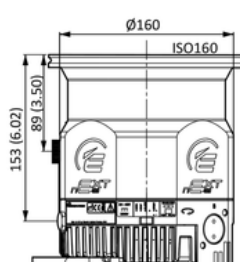
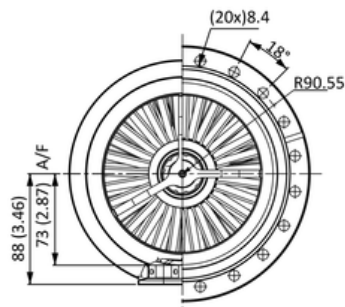
nEXT250D



nEXT300D



nEXT400D



TECHNICAL DATA

	nEXT240	nEXT300	nEXT400
Inlet flange	DN100 ISO-K or DN100 CF	DN100 ISO-K or DN100 CF	DN160 ISO-K or DN160 CF
Inlet pumping speed ls^{-1}			
N_2	240	300	400
Ar	230	280	380
He	230	340	390
H_2	165	280	325
Compression ratio (D)			
N_2	$>1 \times 10^{11}$		
Ar			
He	3×10^5	1×10^6	1×10^8
H_2	1×10^4	5×10^4	5×10^5
Compression ratio (T/H)			
N_2	$>1 \times 10^{11}$		
Ar			
He	1×10^6	3×10^6	$>1 \times 10^8$
H_2	1.5×10^4	1×10^5	1×10^6
Backing/interstage/boost ports	NW25		
Vent/purge port	1/8 inch BSPP		
Critical backing pressure (D/H)	9.5 mbar		10 mbar
Critical backing pressure (T)	20 mbar		
Bake out water cooled/forced air cooled max.	120/115° C		
Recommended backing pump*	RV12/nXDS10i		
Normal rotational speed (rpm)	60,000		
Start time to 90% speed (sec) D/H (T)	115 (150)	145 (190)	180 (210)

	nEXT300A	nEXT400A
Main Inlet pumping speed ls^{-1}		
N_2	300	400
He	340	400
H_2	280	325
Ar	250	380
Peak compression ratio from the backing port to the main inlet port		
N_2	$>1 \times 10^{11}$	
He		
H_2	1×10^8	1×10^9
Ar	4×10^6	4×10^7
Interstage pumping speed	13	
N_2		
He		
H_2		
Ar		
Ultimate pressure (mbar) (Torr)	$<6 \times 10^{-8}$ mbar	$<1 \times 10^{-8}$ mbar
Mass (kg)	6.0	6.5
Backing/Interstage ports	NW25	NW25
Vent/purge ports	1/8 inch BSPP	1/8 inch BSPP
Start time to 90% speed (sec)	200	220
Critical backing pressure		
N_2	12	
He	12.5	
H_2	6	
Recommended backing pump	RV12/nXDS10	
Operation attitude	Vertical and upright to horizontal	
Normal rotational speed RPM	60000	

*A smaller backing pump may be used depending on application.

Accessories and spares nEXT 240/300/400

Pump	Product description	Order number
Controller	TAG controller	D39592000
	TAG power supply	D39592800
	TIC200 turbo and instrument controller	D39722000
Cooling	nEXT radial air cooler	B58053175
	nEXT axial air cooler	B58053185
	nEXT water cooler	B80000815
Bakeout	CF100 flange heater 100-120 V	B58052773
	CF100 flange heater 200-240 V	B58052774
	CF160 flange heater 100-120 V	B58052775
	CF160 flange heater 200-240 V	B58052776
Venting	TAV5 solenoid operated vent valve	B58066010
Service	Oil cartridge tool kit	B80000812
	Bearing tool kit	B80000805
	Oil cartridge	B80000811
	Bearing and oil cartridge	B80000810

Ordering info

Product description	Order number
nEXT240D ISO-K100 160W	B81200100
nEXT240D CF100 160W	B81200200
nEXT240T ISO-K100 160W	B81300100
nEXT240T CF100 160W	B81300200
nEXT300D ISO-K100 160W	B82200100
nEXT300D CF100 160W	B82200200
nEXT300T ISO-K100 160W	B82300100
nEXT300T CF100 160W	B82300200
nEXT300A ISO100 160W	B82A00100
nEXT300A CF100 160W	B82A00200
nEXT300A ISO100 160W NW16	B82A00104
nEXT300A CF100 160W NW16	B82A00204
nEXT300A ISO100 i0 160W	B82A10100

Product description	Order number
nEXT400D ISO-K160 160W	B83200300
nEXT400D CF160 160W	B83200400
nEXT400T ISO-K160 160W	B83300300
nEXT400T CF160 160W	B83300400
nEXT400A ISO160 160W	B83A00300
nEXT400A CF160 160W	B83A00400
nEXT400A ISO160 160W NW16	B83A00304
nEXT400A CF160 160W NW16	B83A00404
nEXT400A ISO160 i0 160W	B83A10300

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