

# nEXT730, 930 AND 1230 TURBOMOLECULAR PUMP

edwardsvacuum.com

**Edwards are proud to offer the nEXT730, nEXT930 and nEXT1230 turbomolecular pumps, these larger pumps offer choices for customers requiring higher pumping speeds from 730 up to 1250 l/s for nitrogen.**

As well as addressing the R&D market, where high compression, faster pumping speeds are required, these pumps are also designed to meet the requirements of the coating market and other diffuse market sectors such as Heat treatment, Furnace applications, Ebeam welding, Etch, Ion implant, Degassing and Cylinder evacuation.

For our OEM customers derivative versions of these products can be developed, just like the existing nEXT pumps, and like the existing nEXT pumps split flow variants are possible. This will give benefits for our customers with larger instruments as well as the possibility to reduce the total number of pumps on existing instruments.

The new products offer market leading performance for pumps of their class, and in a compact footprint. The pumps feature bearings with a typical life time of at least 4 years with no maintenance, which can then be replaced simply and economically by the customer themselves when required or customers may choose from our other service support offerings.

The pumps are able to operate in any orientation\*, and are supported by a full range of accessories for cooling, venting, powering and control.

\* for nEXT1230, inverted option available

## FEATURES AND BENEFITS

- Class leading pumping speeds
- Outstanding compression ratios
- Ease of integration and installation
- Assured reliability
- End user service capability
- Full nEXT established communication interface



TECHNICAL DATA

		nEXT730Q	nEXT730D		nEXT730H	
Inlet flange		DN 160 ISO-K	DN 160 ISO-K	DN 160 CF	DN 160 ISO-K	DN 160 CF
<b>Main inlet pumping speed</b>						
Inlet pumping speed ls <sup>-1</sup>	N2	730	730	690	720	680
	Ar	665	665	620	655	610
	He	820	820	760	850	790
	H2	715	715	670	755	710
<b>Gas throughput</b>						
Gas throughput mbar ls <sup>-1</sup>	N2	>40	14		4	
	Ar	6.8	3.5		2.6	
	He	>50	21		7	
	H2	>50	>> 14		17	
<b>Peak compression ratio backing port to main inlet port</b>						
Compression ratio***	N2	>1x10 <sup>8</sup>	> 1x10 <sup>11</sup>		>1x10 <sup>13</sup>	
	Ar	>1x10 <sup>8</sup>	> 1x10 <sup>11</sup>		>1x10 <sup>13</sup>	
	He	1x10 <sup>5</sup>	1.2x10 <sup>8</sup>		5x10 <sup>9</sup>	
	H2	1x10 <sup>4</sup>	4.0x10 <sup>6</sup>		3x10 <sup>8</sup>	
Ultimate pressure**	mbar	<1x10 <sup>-7</sup>	< 3.5x10 <sup>-9</sup>	< 6x10 <sup>-10</sup>	<7x10 <sup>-9</sup>	<1x10 <sup>-10</sup>
Max. permissible backing pressure	mbar	6	15		12	
Normal rotational speed	rpm	49200				
Start time to 90% speed (sec)	min	2.5				
Max. power consumption	W	500 (default), 600 (max.)				
Power consumption at ultimate pressure	W	40				
Type of protection	IP	54				
Recommended cooling method		Water*	Convection*			
Optional cooling		n/a	Air or Water*			
Cooling water connection	inch	Plug-in connection for 6x1 hose/alternative G 1/8				
Cooling water consumption	l/h	60				
Critical cooling water pressure	bar(g)	6				
Permissible cooling water temperature	°C	15 to 35				
Mass (kg)	kg	15.4	14.6	19.6	14.6	19.6
Recommended backing pump*		nXRi, XDS35i, E2M28**				
Noise level with convection cooling with radial air cooler	dB(A)	< 40 n/a	< 40 < 55			
Water cooled/forced air cooled max. bake out	°C	n/a	100			
Purge gas flow	mbar · ls <sup>-1</sup> sccm	0.4 24				
Vent/purge port	inch	G 1/8				

\*Depending on the ambient temperature, the gas type and throughput, performance may be limited by the cooling method.

\*\*Please contact the supplier to discuss your specific system details and the achievement of ultimate pressure.

\*\*\*The compression ration of a TMP describes the performance of the TMP design for the compression of a gas type at special conditions. The compression data were measured only using the CF flange variants.

TECHNICAL DATA

		nEXT930Q	nEXT930D	
Inlet flange		DN 200 ISO-K	DN 200 ISO-K	DN 200 CF
<b>Main inlet pumping speed</b>				
Inlet pumping speed ls <sup>-1</sup>	N2	925	925	720
	Ar	865	865	810
	He	905	905	840
	H2	735	735	690
<b>Gas throughput</b>				
Gas throughput mbar ls <sup>-1</sup>	N2	>40	14	
	Ar	6.8	3.5	
	He	>50	21	
	H2	>50	>> 14	
<b>Peak compression ratio backing port to main inlet port</b>				
Compression ratio***	N2	>1x10 <sup>8</sup>	> 1x10 <sup>11</sup>	
	Ar	>1x10 <sup>8</sup>	> 1x10 <sup>11</sup>	
	He	1x10 <sup>5</sup>	1.2x10 <sup>8</sup>	
	H2	1x10 <sup>4</sup>	4.0x10 <sup>6</sup>	
Ultimate pressure**	mbar	<1x10 <sup>-7</sup>	< 3.5x10 <sup>-9</sup>	< 6x10 <sup>-10</sup>
Max. permissible backing pressure	mbar	6	15	
Normal rotational speed	rpm	49200		
Start time to 90% speed (sec)	min	2.5		
Max. power consumption	W	500 (default), 600 (max.)		
Power consumption at ultimate pressure	W	40		
Type of protection	IP	54		
Recommended cooling method		Water*	Convection*	
Optional cooling		n/a	Air or Water*	
Cooling water connection	inch	Plug-in connection for 6x1 hose/alternative G 1/8		
Cooling water consumption	l/h	60		
Critical cooling water pressure	bar(g)	6		
Permissible cooling water temperature	°C	15 to 35		
Mass (kg)	kg	15.4	15.4	21.7
Recommended backing pump*		nXRi, XDS35i, E2M28**		
Noise level with convection cooling with radial air cooler	dB(A)	< 40 n/a	< 40 <55	
Water cooled/forced air cooled max. bake out	°C	n/a	100	
Purge gas flow	mbar · ls <sup>-1</sup> sccm	0.4 24		
Vent/purge port	inch	G 1/8		

\*Depending on the ambient temperature, the gas type and throughput, performance may be limited by the cooling method.

\*\*Please contact the supplier to discuss your specific system details and the achievement of ultimate pressure.

\*\*\*The compression ration of a TMP describes the performance of the TMP design for the compression of a gas type at special conditions. The compression data were measured only using the CF flange variants.

TECHNICAL DATA

		nEXT1230H		
Inlet flange		DN 200 CF	DN 200 ISO-F	DN 200 ISO-K
<b>Main inlet pumping speed</b>				
Inlet pumping speed ls <sup>-1</sup>	N2	1250		
	Ar	1150		
	He	1350		
	H2	1150		
<b>Gas throughput</b>				
Gas throughput mbar ls <sup>-1</sup>	N2	9		
	Ar	3		
	He	>20		
	H2	>20		
<b>Peak compression ratio backing port to main inlet port</b>				
Compression ratio***	N2	> 1x10 <sup>11</sup>		
	Ar	> 1x10 <sup>11</sup>		
	He	4x10 <sup>8</sup>		
	H2	1x10 <sup>7</sup>		
Ultimate pressure**	mbar	<5x10 <sup>-10</sup>	indicate higher pressure for ISO-K and ISO-F	
Max. permissible backing pressure	mbar	15		
Normal rotational speed	rpm	42000		
Start time to 90% speed (sec) H	min	2.5		
Max. power consumption	W	660 (default), 800 (max.)		
Power consumption at ultimate pressure	W	50		
Type of protection	IP	54		
Recommended cooling method		Water*		
Optional cooling		Forced air cooling*		
Cooling water connection	inch	Plug-in connection for 6x1 hose/alternative G 1/8		
Cooling water consumption	l/h	60		
Critical cooling water pressure	bar(g)	15		
Permissible cooling water temperature	°C	15 to 35		
Mass (kg) H	kg	32.6	24.9	23.7
Recommended backing pump*		nXRi, XDS35i, E2M28**		
Noise level with convection cooling with radial air cooler	dB(A)	<44	<55	<44 <55
Water cooled/forced air cooled max. bake out	°C	100	n/a	
Purge gas flow	mbar · ls <sup>-1</sup> sccm	0.4 24		
Vent/purge port	inch	G 1/8		

\*Depending on the ambient temperature, the gas type and throughput, performance may be limited by the cooling method.

\*\*Please contact the supplier to discuss your specific system details and the achievement of ultimate pressure.

\*\*\*The compression ration of a TMP describes the performance of the TMP design for the compression of a gas type at special conditions. The compression data were measured only using the CF flange variants.

## Official Distributor in Australia



# EZZI VISION

**Vacuum and Thin Film Technology**

### CONTACT US

T: 1800 GO EZZI

E: [sales@ezzivision.com.au](mailto:sales@ezzivision.com.au)

W: [ezzivision.com.au](http://ezzivision.com.au)

**VIC:** 13/62 Ramset Drive, Chirnside Park,  
VIC 3116, Australia

**NSW:** Unit 1, 80 O'Riordan St, Alexandria,  
NSW 2015, Australia

**WA:** Unit 11, 24 Baile Road, Canning Vale,  
WA 6155 Australia

### GLOBAL CONTACTS

© Edwards Limited 2021. All rights reserved Edwards and the Edwards logo are trademarks of Edwards Limited.

Whilst we make every effort to ensure that we accurately describe our products and services, we give no guarantee as to the accuracy or completeness of any information provided in this datasheet.

Edwards Ltd, registered in England and Wales  
No. 6124750, registered office: Innovation Drive,  
Burgess Hill, West Sussex, RH15 9TW, UK.

#### EMEA

UK	+44 (0) 1444 253 000 (local rate) 0845 921 2223
Belgium	+32 2 300 0730
France	+33 1 4121 1256
Germany	0800 000 1456
Italy	+ 39 02 48 4471
Israel	+ 972 8 681 0633

#### ASIA PACIFIC

China	+86 400 111 9618
India	+91 20 4075 2222
Japan	+81 47 458 8836
Korea	+82 31 716 7070
Singapore	+65 6546 8408
Taiwan	+886 3758 1000

#### AMERICAS

USA	+1 800 848 9800
Brazil	+55 11 3952 5000

