PRODUCT DATA SHEET

TRANSCALC HSM DEVELOPMENT SOFTWARE

edwardsvacuum.com

With Edwards you can quickly and flexibly create the perfect vacuum solution for your needs.

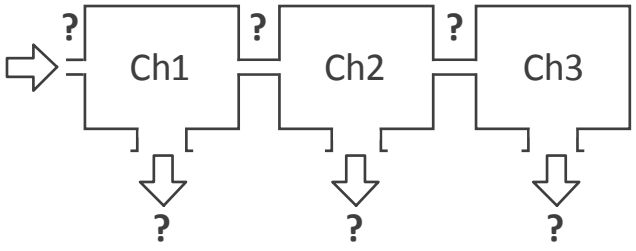
When an off the shelf pump will not meet your requirements for space or performance, our Applications & Derivatives team will develop a bespoke vacuum solution to turn the proposed modelled system into reality.

At Edwards a partnership approach is taken to system design, and it all starts with a vacuum expert using *TransCalc HSM* to optimise your vacuum system. Developed in-house, *TransCalc HSM* is a unique program used to simulate the complete vacuum system from atmosphere to ultra-high vacuum (UHV). This software has been developed to give rapid simulation of the behaviour of the proposed vacuum solution to ensure it perfectly meets your requirements. Accurate computer simulation offers you the chance to streamline your development cycle, avoiding a costly iterative approach and delivering a quicker time to market.

A typical example of how *TransCalc HSM* would be used to optimise your system follows three simple steps:

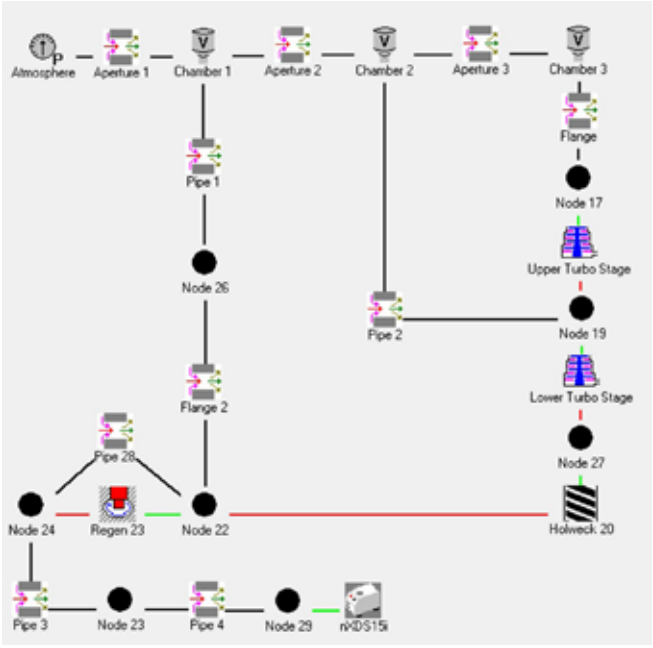
STEP 1: Define the system with unknowns

You provide us with your vacuum system requirements.



STEP 2: A *TransCalc HSM* model is built

Edwards vacuum expert will produce models of solutions that match your requirements. A variety of alternative configurations will be considered to deliver reduced power consumption or increased gas throughput.



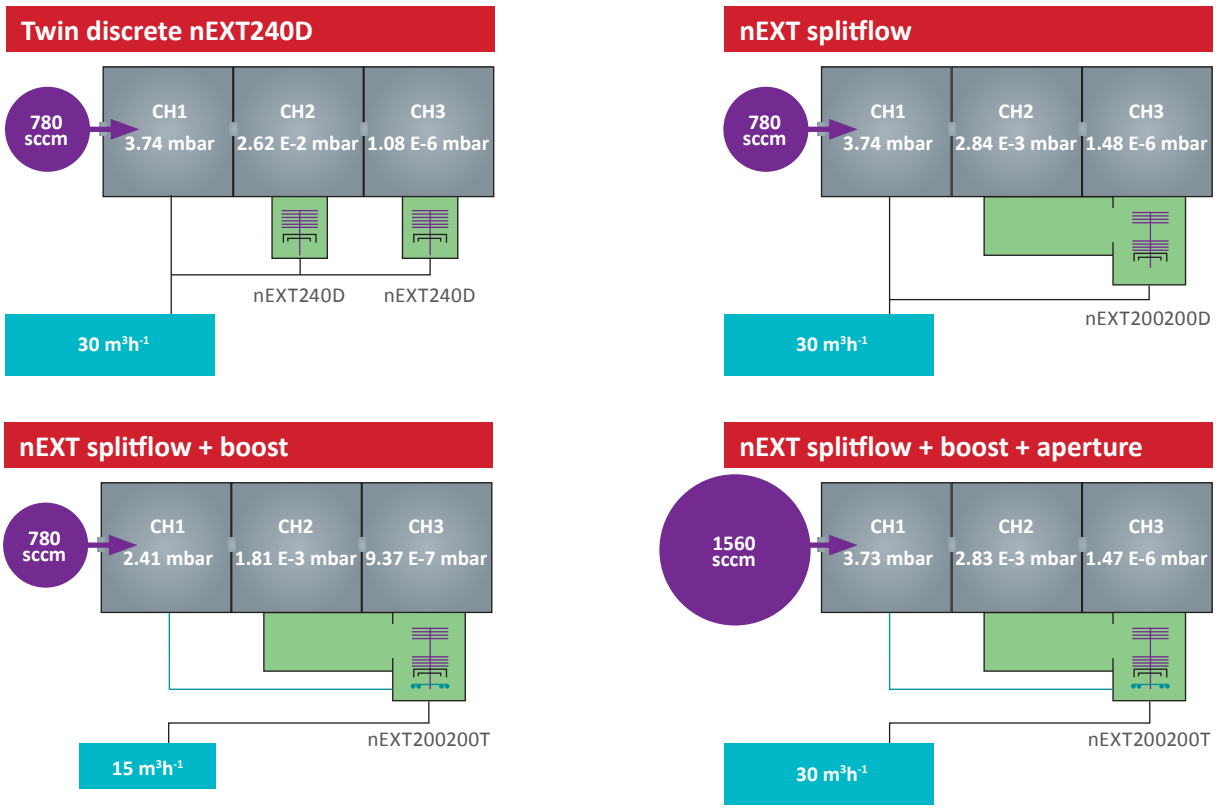
Screenshot taken from *TransCalc HSM*

***TransCalc HSM* enables the rapid modelling of vacuum systems in order to decide on variables such as inter-chamber aperture sizes and pump combinations without the need of an extended trial and error process.**

STEP 3: The simulation is run and will provide the modelling data in a concise format

Performance Data	Throughput (sccm)	Aperture 1 Diameter (mm)	Chamber 1 (mbar)	Aperture 2 Diameter (mm)	Chamber 2 (mbar)	Aperture 3 Diameter (mm)	Chamber 3 (mbar)	Total Power (W)
Twin discrete nEXT240D	778	0.30	3.74	1.00	2.62E-03	1.00	1.08E-06	71.3
nEXT splitflow	778	0.30	3.74	1.00	2.84E-03	1.00	1.48E-06	48.8
nEXT splitflow + boost	778	0.30	2.41	1.00	1.81E-03	1.00	9.39E-07	62.0
nEXT splitflow + boost = aperture	1562	0.43	3.73	1.00	2.83E-03	1.00	1.47E-06	81.4

You can then decide which solution best satisfies the priorities of your application; be it cost, power consumption or absolute performance.



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