Why use lower compressed air pressure to generate nitrogen?

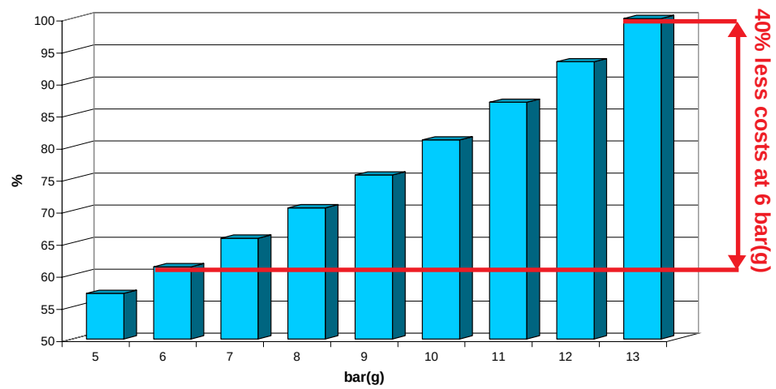
Lower cost per m³ nitrogen

As a result of:

- Lower compressor operating and maintenance costs, longer compressor life
- Less noise and heat production
- Less condensate formed
- Lower system pressure-drop

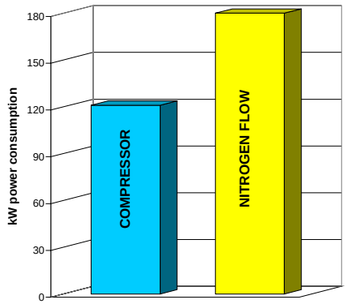
Compressor operating costs

Compressor operating costs at different pressures



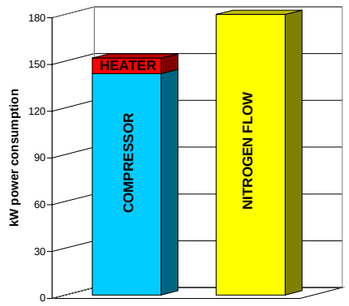
Comparison

Parker HiFluxx ST15020



6 bar(g) compressed air

Other membrane (low permeable)



13 bar(g) compressed air

Do the test!

PARKER HIFLUXX ST15020		OTHER LOW PERMEABLE MEMBRANES	
Investment			
Low pressure compressor	€	High pressure compressor	€
Filtration	€	filtration	€
membranes	€	heater	€
System building	€	membranes	€
		system building	€
	€		€
Running costiyear			
power costs low pressure compressor	€	Power costs high pressure compressor	€
Compressor maintenance	€	Power consumption air heater	€
Filter mainatenance	€	Compressor maintenance	€
		Filter maintenance	€
	€		€

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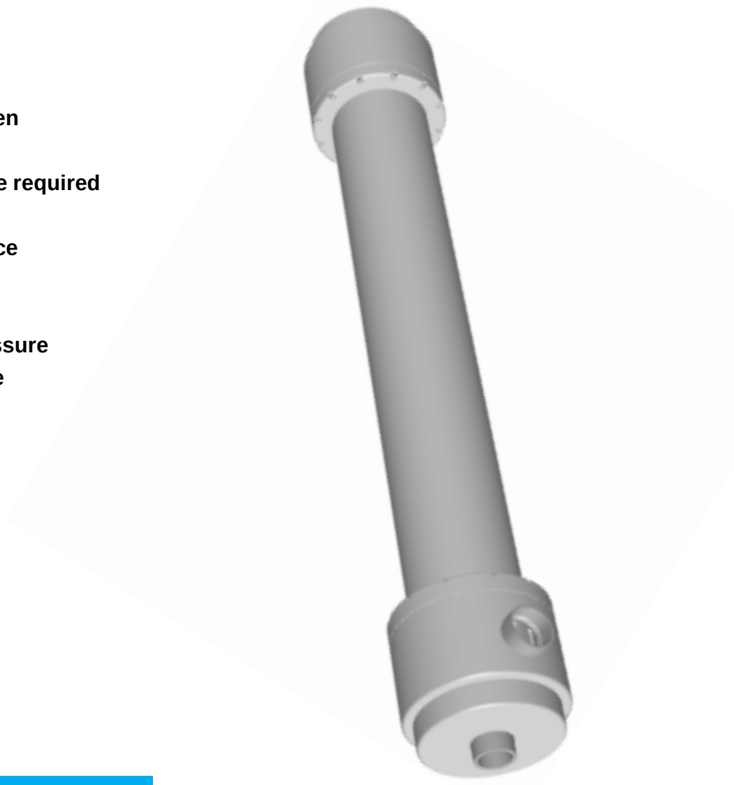
Product datasheet

HiFluxx® ST15020

Low pressure nitrogen generation

Features

- **Reduced costs per m³ nitrogen**
- **No heater required**
- **Low compressed air pressure required**
- **High flow per module**
- **Less compressor maintenance**
- **Less heat produced**
- **Reduced investment cost**
- **System design for lower pressure**
- **Less connections to be made**



Product description

Parker nitrogen membrane modules are based on Parker hollow fibre membrane technology, which makes it possible to separate air into nitrogen and an oxygen-enriched stream. The HiFluxx® membrane modules easily enable you to produce nitrogen from compressed air.

The unique PPO hollow fibres in Parker HiFluxx® membrane modules are the highest permeable membranes in the world. These proprietary hollow fibres make it possible to generate nitrogen with low compressed air pressure.

Why generate compressed air at 13 bar(g) when the nitrogen (in most cases) is only required at low pressure?

Using the HiFluxx® ST15020 high performance membrane makes it possible to:

- **Generate the same amount of nitrogen with the same or lower membrane system investment**
- **At pressures as low as 6 bar(g) / 87 psig**
- **Without the need for compressed air heaters**
- **Resulting in significant lower costs per m³ nitrogen**

S3.1.098d

Product datasheet

HiFluxx® ST15020

Nominal nitrogen production capacity in Nm3/hr*					
Nitrogen purity %	99	98	97	96	95
4 bar(g)	24	39	53	71	89
5 bar(g)	35	58	78	105	131
6 bar(g)	46	75	103	137	171
7 bar(g)	54	89	121	161	201
8 bar(g)	59	97	133	177	221

*at nominal conditions

Air consumption in Nm3/hr at nominal capacity					
Nitrogen purity %	99	98	97	96	95
4 bar(g)	161	175	191	220	239
5 bar(g)	238	259	283	324	353
6 bar(g)	289	324	359	411	445
7 bar(g)	340	381	423	483	523
8 bar(g)	374	419	465	531	576

Module selection is done on a project basis where the individual module performance can vary by 15% compared to the nominal capacity

Ambient conditions

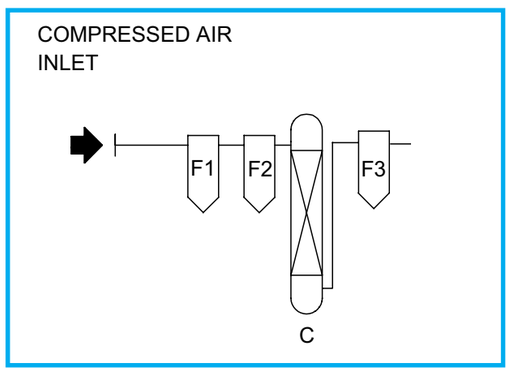
ambient temperature range:	2 - 50 °C/ 36 - 122 °F (frostfree)
temperatures other than 20 °C:	see bulletin “correction factors HiFluxx”
ambient pressure:	atmospheric
air quality:	clean air without contaminants

Nominal conditions

temperature :	20 °C / 68 °F
ambient pressure :	1013 mbar(a)
max. pressure drop :	1 bar

Compressed air specifications

max. operating pressure :	8 bar(g)/116 psig
compressed air temperature range:	2 - 50 °C/ 36 - 122 °F
residual oil content :	< 0.01 mg/m³
particles :	filtered at 0.01 µ cut off
relative humidity :	< 100% (non condensing)



Compressed air filtration set

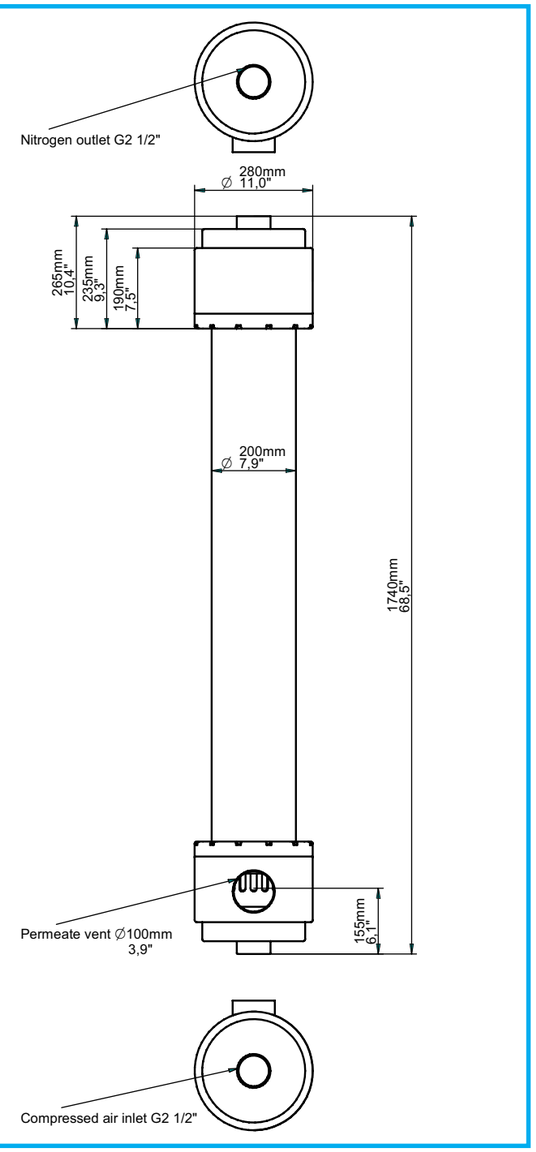
Parker Filtration and Separation advises to include under all circumstances a carbon adsorber filter, bed type in the hereafter proposed pre-filtration:

F1 Coarse coalescing filter
F2 Fine coalescing filter
C Carbon adsorber, bed type
F3 Dust carry-over filter

For required filtration information we refer to our document K3.1.147

Dimensional drawing of HiFluxx® ST15020

Aluminium P/N 159.003846



Dimensions and connections

H x ø D	1740 x 280 mm / 68.5 x 11 inch
Weight	48 kg/ 106 lbs
connections inlet/outlet	G 2.5” / Rp 2.5” female
vent	100mm / 3.9”
housing material	aluminium