



# Varian TV-401/301

## Technical Specifications

Pumping speed (Intrinsic)	Main port:	Side port:
N <sub>2</sub>	310 l/s	400 l/s
He	300 l/s	380 l/s
H <sub>2</sub>	210 l/s	300 l/s
Total compression ratio versus foreline:	Main port:	Side port:
N <sub>2</sub>	>3 x 10 <sup>8</sup>	1 x 10 <sup>6</sup>
He	1.4 x 10 <sup>5</sup>	1.4 x 10 <sup>4</sup>
H <sub>2</sub>	6 x 10 <sup>4</sup>	7 x 10 <sup>3</sup>
Base pressure (with recommended forepump)	mechanical: < 7 x 10 <sup>-10</sup> mbar (< 5.25 x 10 <sup>-10</sup> Torr) diaphragm: 7 x 10 <sup>-8</sup> mbar (5.25 x 10 <sup>-8</sup> Torr)	
Inlet flange	DN 100	
Nominal rotational speed	60000 RPM	
Start-up time	< 3 minutes	
Recommended forepump	mechanical: Agilent DS 302 dry pump: Agilent SH 100	
Operating position	any	
Operating ambient temperature	+ 5 °C to + 35 °C	
Cooling requirements	Natural air convection Forced air or water optional	
Forced air option	Typical flow: 140 m <sup>3</sup> /h An internal supply is available (see para. "P4 – External fan")	
Coolant water	flow: 200 l/h (0.89 GPM) temperature: + 10 °C to + 30 °C pressure: 3 to 5 bar (45 to 75 Psi)	
Bakeout temperature	80 °C at inlet flange max.	
Noise level	≤ 45 dB (A) at 1 meter	
Pwr supply (mains):		
Input voltage:	100 - 240 Vac	
Input freq.:	50 - 60 Hz	
Max input pwr:	300 VA	
Stand-by pwr:	10 W	
Protection fuse	4 A	
Compliance with:	UNI EN 292-1 UNI EN 292-2 EN-CENELEC 55011 IEC 1000-4-2 (ex 801-2) IEC 1000-4-3 (ex 801-3) IEC 1000-4-4 (ex 801-4) EN 61010-1 (IEC 1010-1) EN 1012-2	



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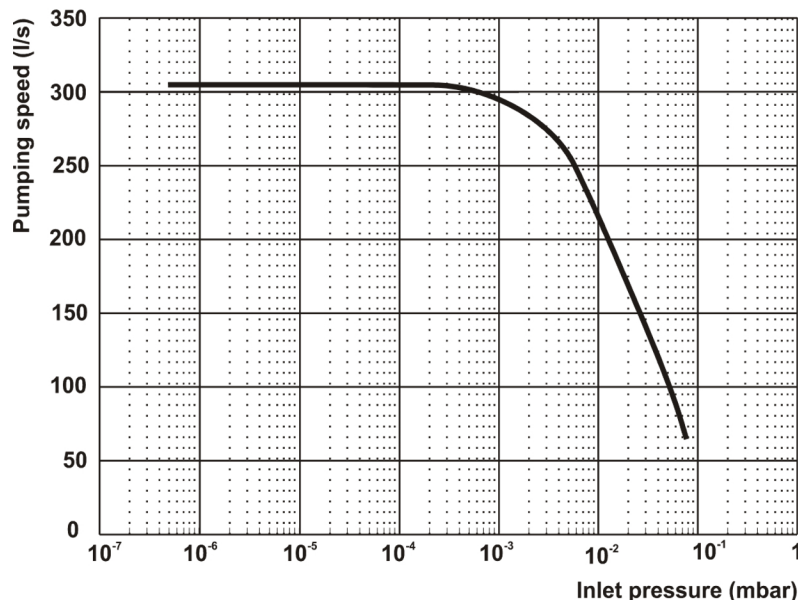
### Technical Specifications cont.

Power cable	With European or NEMA plug 3 meters long (optional)
Serial communication (Navigator kit)	RS232 cable with a 9-pin D type male connector and a 9-pin D type female connector, and Navigator software (optional)
Pump power output	54 Vac 3 phases 150 W max 1010 Hz max nominal rotational speed: 60 kRPM
Lubricant	permanent lubrication
Operating temperature	5 °C to 40 °C
Operating humidity	0 to 10% (without condensing)
Installation category	II
Pollution degree	2
Storage temperature	- 20 °C to + 70 °C
Weight kg (lbs):	
Pump:	5.8 (12.76)
Controller:	1 (2.2)

**NOTE**

When the TV 401/301 MS has been stored at a temperature less than 5 °C, wait until the system has reached the above mentioned temperature.

## Pumping Curves



Graph of nitrogen pumping speed vs inlet pressure (Main port)



# PROVAC

## SALES

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# Varian TV-401/301

## Dimensions

