



# Varian TV-301SF

## Technical Specifications

Pumping speed	Main port: N <sub>2</sub> : 250 l/s He: 220 l/s H <sub>2</sub> : 200 l/s	Side port: N <sub>2</sub> : 11 l/s He: 15 l/s H <sub>2</sub> : >10 l/s
Total compression ratio (main port + side port):	Main port: N <sub>2</sub> : >2 x 10 <sup>8</sup> He: 1 x 10 <sup>5</sup> H <sub>2</sub> : 2 x 10 <sup>4</sup>	Side port: N <sub>2</sub> : 230 He: 140 H <sub>2</sub> : 100
Base pressure * (with recommended forepump)	mechanical: < 2 x 10 <sup>-10</sup> mbar (< 1.5 x 10 <sup>-10</sup> Torr)	
Inlet flange	ISO 100	
Foreline flange	KF16 NW (KF25 – optional)	
Side port flange	KF40	
Rotational speed	56000 RPM	
Start-up time	< 3 minutes	
Recommended forepump	mechanical: Agilent DS 302 dry pump: Agilent SH 110	
Operating position	any	
Cooling requirements	Natural air convection Forced air or water optional	
Operating ambient temperature	+ 5° C to + 35° C	
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	
Max operating power:	150 W with water or air cooling	
Protection fuse	4 A	



## Varian TV-301SF

### Technical Specifications cont.

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Power supply (24 Vdc):	
Input voltage:	24 Vdc
Max input power:	200 W
Stand-by power:	10 W
Max operating power:	150 W with water or air cooling

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Protection fuse	8 A
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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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Power cable	With European or NEMA plug 3 meters long (optional)
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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)
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Storage temperature	-20 ° C to +70 ° C
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Input	75 Vac, three phase, 963 Hz
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Lubricant	permanent lubrication
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Installation category	II
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Pollution degree	2
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Storage temperature	- 20 ° C to + 70 ° C
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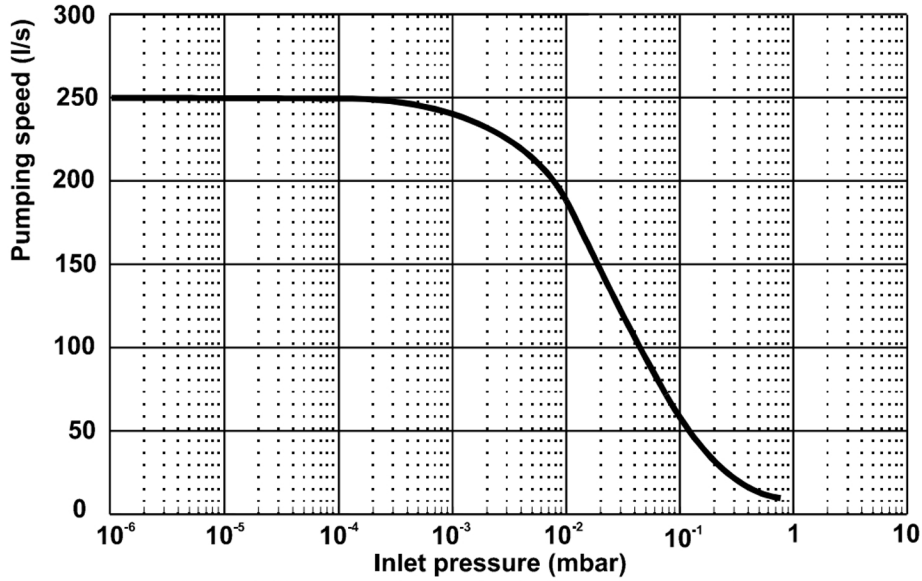
Weight kg (lbs):	
Kit:	4.5 (10)
Controller:	1 (2.2)

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\* (According to standard DIN 28 428, the base pressure is that measured in a leak-free test dome, 48 hours after the completion of test dome bake-out, with a Turbopump fitted with a ConFlat flange and using the recommended pre-vacuum pump).



## Varian TV-301SF Pumping Curves



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

## Dimensions

24V CONTROLLER FRONT PANEL

