



Varian TV-81M, TV-81T

Technical Specifications

Pump Specification	Turbo-V 81 M		Turbo-V 81 T	
	DN 40	DN 63	DN 40	DN 63
Pumping Speed, l/s				
Nitrogen	50	77	50	77
Helium	56	65	56	65
Hydrogen	46	50	46	50
Compression Ratio				
Nitrogen	5×10^8	5×10^8	7×10^8	7×10^8
Helium	8×10^4	8×10^4	3×10^3	3×10^3
Hydrogen	7×10^3	7×10^3	3×10^2	3×10^2
Base pressure, mbar				
with recommended mechanical pump	5×10^{-10}	5×10^{-10}	5×10^{-9}	5×10^{-9}
with recommended dry pump	5×10^{-9}	5×10^{-9}	5×10^{-8}	5×10^{-8}
Startup Time, min				
	< 1	< 1	< 1	< 1
Rotational Speed, rpm				
	80,000	80,000	80,000	80,000
Recommended Forepump				
Two-stage mechanical pump	DS 42 - DS 102	DS 42 - DS 102	DS 42 - DS 102	DS 42 - DS 102
Dry pump	SH-110	SH-110	SH-110	SH-110
Inlet Flange, nominal diameter				
Klump Flange, mm	40	-	40	-
ConFlat®, mm (inches OD)	35 (2.75)	63 (4.5)	35 (2.75)	63 (4.5)
ISO clamp style, mm	-	63	-	63
ISO-F bolted, mm	-	-	-	-
Foreline Flange, nominal diameter				
Klump Flange	NW16	NW16	NW16	NW16
SEM Version Available on Request				
	-	-	-	-
Controllers				
Rack Controller	•	•	•	•
Navigator on board Controller	•	•	•	•
Integrated Electronics	-	-	-	-
PCB Controller	•	•	•	•



PROVAC

SALES

PHONE: 831-462-8900

FAX: 831-462-3536

WWW.PROVAC.COM

Varian TV-81M, TV-81T

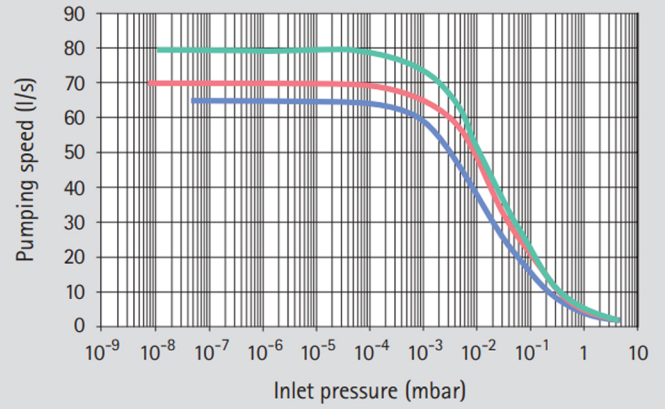
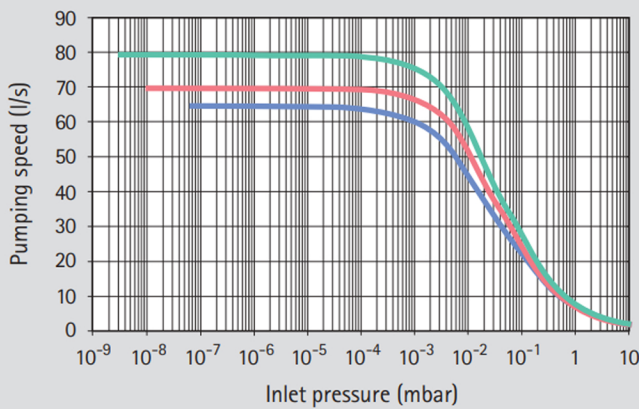
Pumping Curves

TV-81M

TV-81T

Pumping Speed vs Inlet Pressure (DN 63 only)

Pumping Speed vs Inlet Pressure (DN 63 only)



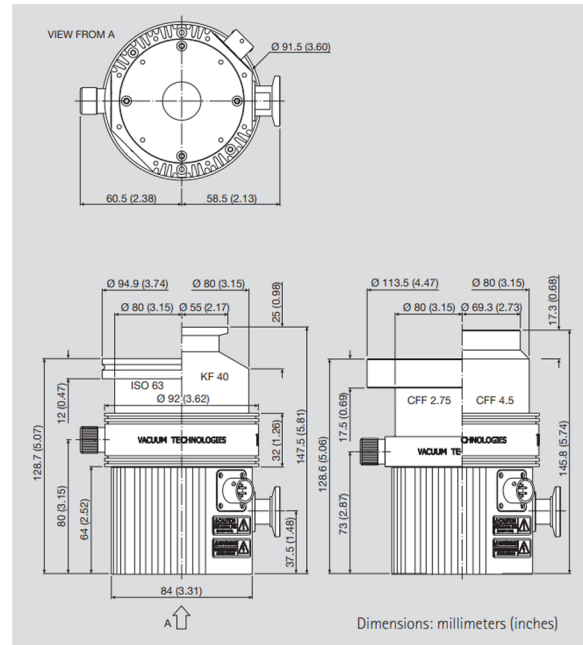
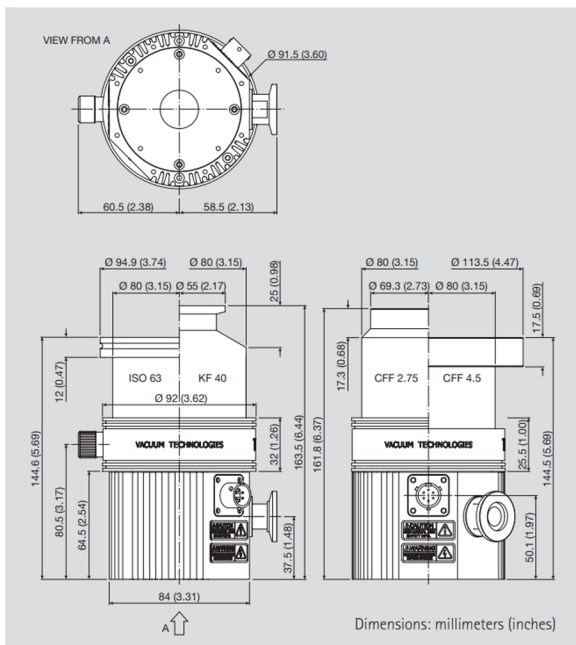
— Nitrogen — Argon — Helium

— Nitrogen — Argon — Helium

Dimensions

TV-81M

TV-81T





PROVAC

SALES

PHONE: 831-462-8900

FAX: 831-462-3536

WWW.PROVAC.COM

Varian TV-81M, TV-81T

Features & Benefits

- wide pumping speed range
- high speed and compression
- designed for very high gas load operation
- monolithic rotor
- highly reliable, maintenance-free ceramic ball bearings
- very high foreline tolerance

Applications

- semiconductors • high energy physics • research laboratories • fusion technology • UHV research • analytical instrumentation • electron microscopy • focused ion beam systems • surface analysis

