



# Varian TV-70, TV-70D, TV-70LP

## Technical Specifications

Pump Specification	Turbo-V 70		Turbo-V 70 D		Turbo-V 70 LP	
	DN 40	DN 63	DN 40	DN 63	DN 40	DN 63
<b>Pumping Speed, l/s</b>						
Nitrogen	46	68	40	60	46	68
Helium	52	60	27	30	52	60
Hydrogen	42	45	20	20	42	45
<b>Compression Ratio</b>						
Nitrogen	$5 \times 10^7$	$5 \times 10^7$	$5 \times 10^7$	$5 \times 10^7$	$5 \times 10^8$	$5 \times 10^8$
Helium	$4 \times 10^3$	$4 \times 10^3$	$7 \times 10^3$	$7 \times 10^3$	$8 \times 10^4$	$8 \times 10^4$
Hydrogen	$4 \times 10^2$	$4 \times 10^2$	$1.5 \times 10^3$	$1.5 \times 10^3$	$1 \times 10^4$	$1 \times 10^4$
<b>Base pressure, mbar</b>						
with recommended mechanical pump	$1 \times 10^{-9}$	$1 \times 10^{-9}$	$< 1 \times 10^{-9}$	$< 1 \times 10^{-9}$	$< 2 \times 10^{-10}$	$< 2 \times 10^{-10}$
with recommended dry pump	N/A	N/A	$< 1 \times 10^{-8}$	$< 1 \times 10^{-8}$	$< 2 \times 10^{-9}$	$< 2 \times 10^{-9}$
<b>Startup Time, min</b>						
	< 1	< 1	< 1	< 1	< 1	< 1
<b>Rotational Speed, rpm</b>						
	75,000	75,000	75,000	75,000	75,000	75,000
<b>Recommended Forepump</b>						
Two-stage mechanical pump	DS 102	DS 102	DS 102	DS 102	DS 102	DS 102
Dry pump	N/A	N/A	SH-100	SH-100	SH-100	SH-100
<b>Inlet Flange, nominal diameter</b>						
Klump Flange, mm	40	-	40	-	40	-
ConFlat®, mm (inches OD)	35 (2.75)	63 (4.5)	35 (2.75)	63 (4.5)	35 (2.75)	63 (4.5)
ISO clamp style, mm	-	63	-	63	-	63
<b>Foreline Flange, nominal diameter</b>						
Wheeler, inches ID	-	-	-	-	-	-
Klump Flange	NW16	NW16	NW16	NW16	NW16	NW16
ISO clamp style	-	-	-	-	-	-



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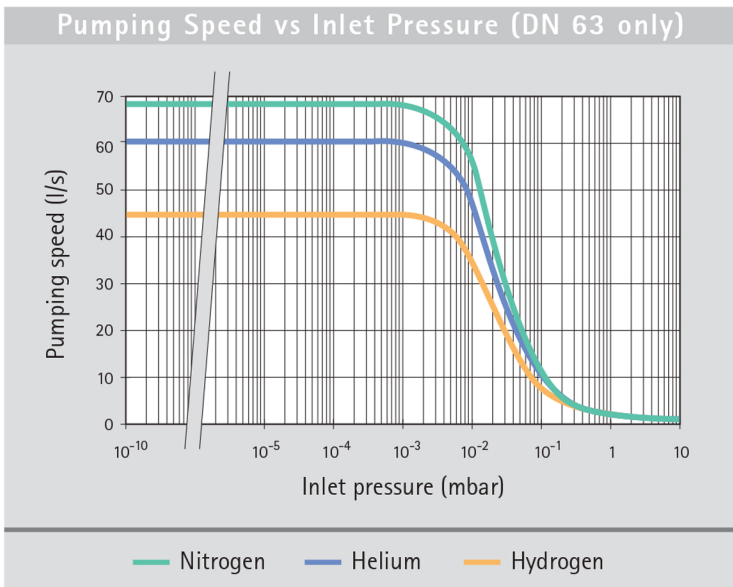
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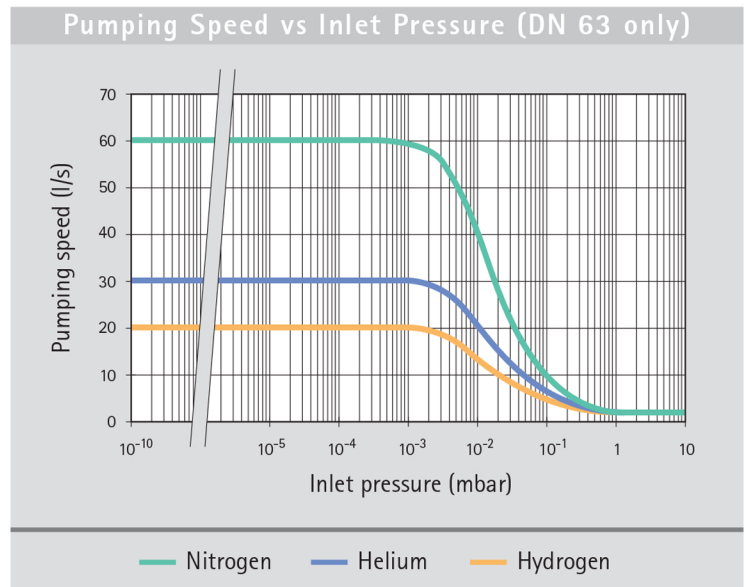
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# Varian TV-70, TV-70D, TV-70LP Pumping Curves

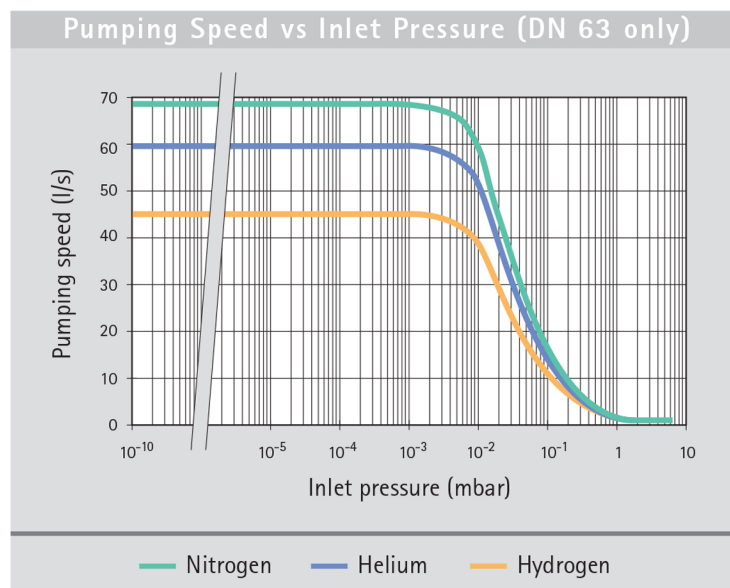
## TV-70



## TV-70D



## TV-70LP

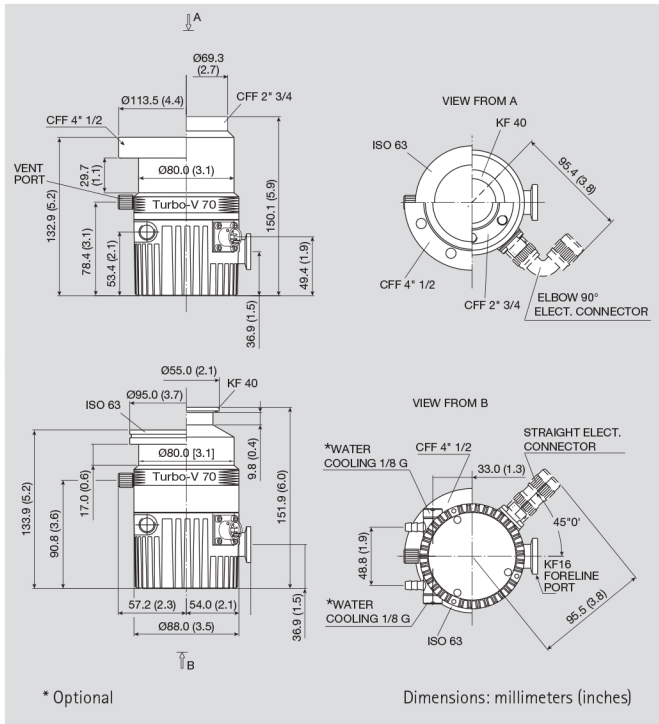




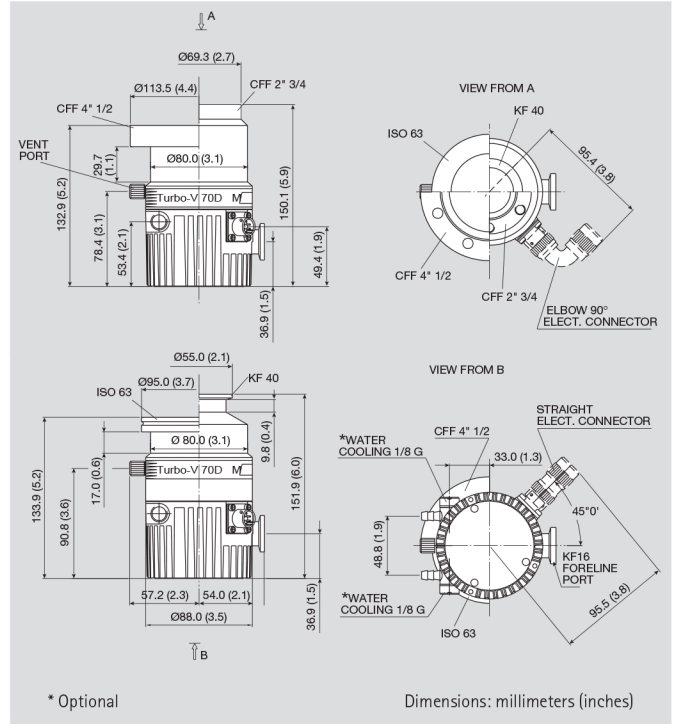
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### Dimensions

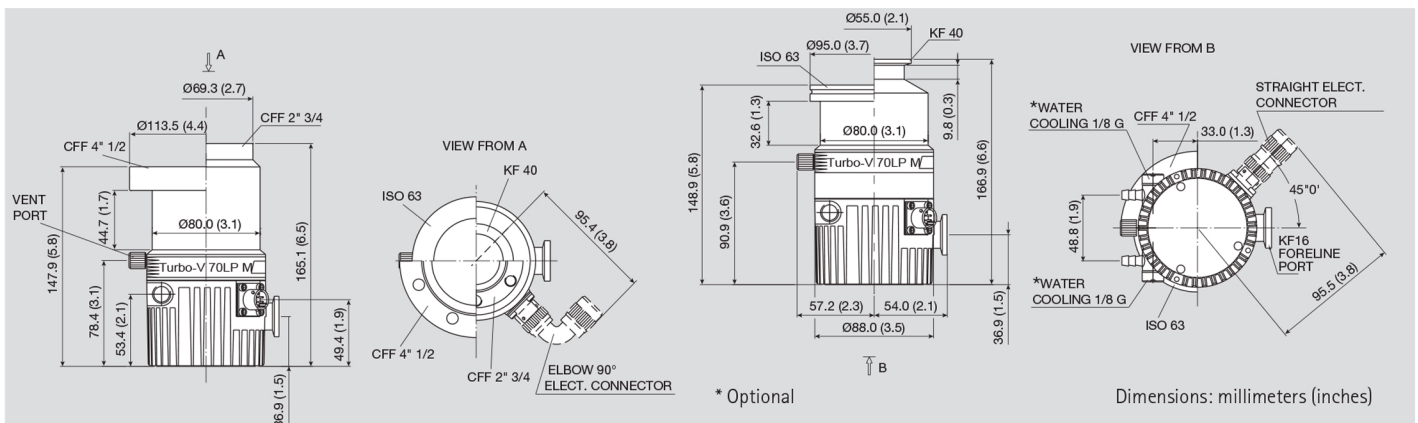
#### TV-70



#### TV-70D



#### TV-70LP





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## Varian TV-70, TV-70D, TV-70LP

### 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