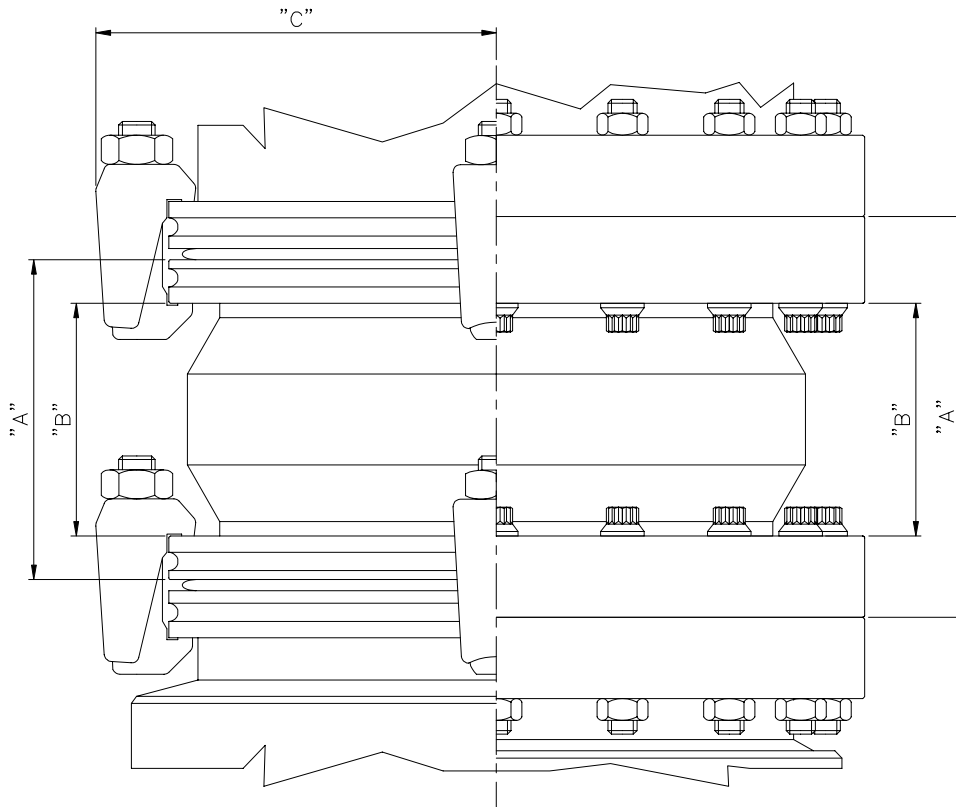


TURBO-V VIBRATION DAMPERS969-9334, 969-9335, 969-9336, 969-9344,
969-9345, 969-9346, 969-9375, 969-9376

Extremely low vibration amplitudes at the turbopump inlet flange are required for some sensitive applications, even lower than the already low levels normally present in the turbopump. Typically scanning electron microscopes, or other analytical instruments require additional dampening of the vibration amplitude. To further reduce the residual amplitude, a vibration damper is provided. To effectively reduce net vibration levels transmitted to the system, the turbopump must be suspended from the vibration damper. Although the actual dampening effect depends on the specific configuration of the complete system, using a Varian vibration damper, the residual vibration amplitude can be typically reduced by a factor of 40 (for CFF flanges) at the frequency of turbopump rotation. For lower frequencies the reduction factor is about 10.



Install the Turbo-V vibration damper using the provided bolts and copper gasket if it is a ConFlat flange (fig. 1).

With an ISO flange, connect the Turbo-V vibration damper using the provided center ring and the clamp screws only (the claw grips are not used).

The table 1 reports the outline dimensions and the mounting requirements of the Turbo-V vibration damper.

TURBO-V VIBRATION DAMPERS		CONDUCTANCE for Air (l/s)	MAX DIMENSIONS			SYSTEM FIXING					
MODEL	INLET FLANGE		"A"	"B"	"C"	DOUBLE CLAMP		SINGLE CLAMP		SCREW	
						N°	SIZE	N°	SIZE	N°	SIZE
969-9344	ISO 100	608	84,0	60,0	85,0	4	M10	8	M8		
969-9345	ISO 160	1830	88,0	64,0	110,0	4	M10	8	M10		
969-9346	ISO200	5630	88,0	64,0	140,0	6	M10	12	M10		
969-9375	ISO 63	251	84,0	60,0	65,0	4	M8	6	M5		
969-9334	CFF 6"	505	101,1	60,0						16	M8
969-9335	CFF 8"	1460	110,2	64,0						20	M8
969-9336	CFF 10"	4370	113,3	64,0						24	M8
969-9376	CFF 4"1/2	168	96,5	60,0						8	M8

Table 1

In the table 2 and 3 is reported the applicability of the vibration damper on Turbomolecular pumps with ISO and CFF flanges.

TURBO-V VIBRATION DAMPERS		TURBO-V PUMP APPLICABILITY	
MODEL	INLET FLANGE	MODEL	DESCRIPTION
969-9344	ISO 100	969-8207	Stack TV250 ISO
		969-8209	Stack TV300HT ISO
		969-8211	Stack TV150HT ISO
		969-8401	Cart TV250 ISO
		969-8403	Cart TV300HT ISO
		969-8415	Cart TV150HT ISO
		969-8834	TV551 Nav. Kit ISO
		969-8924	TV551Nav. Pump ISO
		969-9007	TV250 pump ISO
		969-9009	TV250 pump Dual ISO
		969-9037	TV300HT pump
		969-9047	TV550 pump ISO
		969-9068	TV300HT pump Dual ISO
		969-9076	TV300ICE pump ISO
		969-9078	TV550 ICE pump ISO
		969-9161	150 DryVar pump ISO
		969-9369	TV150HT pump ISO
		969-9381	TV141 Nav. pump ISO
		969-9385	TV141 Nav. pump ISO
		969-9389	TV141 Nav. pump ISO (RS485)
969-9393	TV141 Nav. pump ISO (RS485)		
969-9345	ISO 160	969-8832	TV551 Nav. kit ISO
		969-8922	TV551 Nav. pump ISO
		969-9039	TV300HT pump ISO
		969-9049	TV550 pump ISO
		969-9077	TV550ICE pump ISO
		969-9083	TV300ICE pump ISO
969-9346	ISO200	969-8836	TV701 Nav. kit ISO
		969-8926	TV701 Nav. pump ISO
		969-9057	TV700HT pump ISO
		969-9074	TV1000HT pump ISO
		969-9079	TV700ICE pump ISO
		969-9080	TV1000ICE pump ISO
969-9375	ISO 63	969-8201	Stack TV70 ISO 63
		969-8203	Stack TV70D ISO 63
		969-8205	Stack TV70LP ISO 63
		969-8409	Cart TV70 ISO 63
		969-8411	Cart TV70D ISO 63
		969-8413	Cart TV70LP ISO 63
		969-9365	Turbo-V 70LP Pump ISO 63
		969-9370	Turbo-V150HT Pump ISO 63
		969-9383	Turbo-V141 NAV. EU Pump ISO 63
		969-9387	Turbo-V141 NAV. USA Pump ISO 63
969-9163	150 DRYVAR Pump ISO 63		

Table 2 - ISO Flanges

TURBO-V VIBRATION DAMPERS		TURBO-V PUMP APPLICABILITY	
MODEL	INLET FLANGE	MODEL	DESCRIPTION
969-9334	CFF 6"	969-8206	Stack TV250 CFF
		969-8208	Stack TV300HT CFF
		969-8210	Stack TV150HT CFF
		969-8400	Cart TV250 CFF
		969-8402	Cart TV300HT CFF
		969-8414	Cart TV150HT CFF
		969-8835	TV551 Nav. kit CFF
		969-8925	TV551 Nav. pump CFF
		969-9008	TV250 pump CFF
		969-9010	TV250 Dual pump CFF
		969-9038	TV300HT pump CFF
		969-9048	TV550 pump CFF
		969-9069	TV300HT Dual pump CFF
		969-9095	TV300ICE pump CFF
		969-9098	TV550ICE pump CFF
		969-9160	150 DryVar pump CFF
		969-9371	TV150HT pump CFF
		969-9380	TV141 Nav. pump CFF
		969-9384	TV141 Nav. pump CFF
		969-9388	TV141 Nav. pump CFF
		969-9392	TV141 Nav. pump CFF
969-9335	CFF 8"	969-8833	TV550 Nav. kit CFF
		969-8923	TV550 Nav. pump CFF
		969-9040	TV300HT pump CFF
		969-9050	TV550 pump CFF
		969-9096	TV300ICE pump CFF
		969-9097	TV550ICE pump CFF
969-9336	CFF 10"	969-8837	TV701 Nav. kit CFF
		969-8927	TV701 Nav. pump CFF
		969-9058	TV700HT pump CFF
		969-9075	TV1000HT pump CFF
		969-9099	TV700ICE pump CFF
		969-9100	TV1000ICE pump CFF
969-9876	CFF 4"1/2	969-8200	Stack TV70 CFF 4"1/2
		969-8202	Stack TV70D CFF 4"1/2
		969-8204	Stack TV70LP CFF 4"1/2
		969-8408	Cart TV70 CFF
		969-8410	Cart TV70D CFF
		969-8412	Cart TV70LP CFF
		969-9366	Turbo-V 70LP Pump CFF 4"1/2
		969-9372	Turbo-V150HT Pump CFF 4"1/2
		969-9382	Turbo-V141 NAV. EU Pump CFF 4"1/2
		969-9386	Turbo-V141 NAV. USA Pump CFF 4"1/2
		969-9162	150 DRYVAR Pump CFF 4"1/2

Table 3 - CFF flanges