

VACUUM END CAP FLANGES

BRING YOUR VACUUM TECHNOLOGY TO 0.18- μ MS,

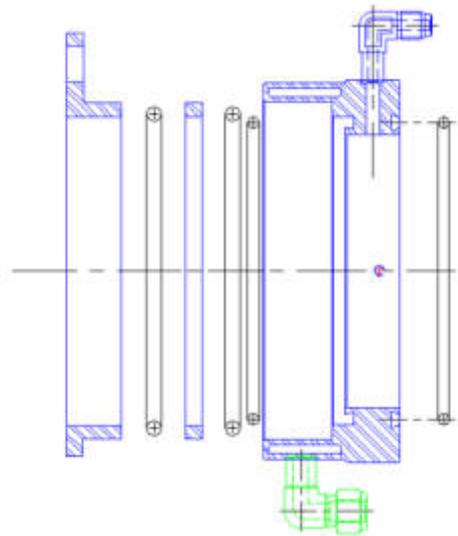


*REDUCE YOUR MAINTENANCE SCHEDULES, AND INCREASE
YOUR OEE, SIMULTANEOUSLY!*

INVAC SYSTEMS offers a full line of vacuum flange assemblies and products for Atmospheric and LPCVD applications. Whether your process is Poly Silicon, Silicon Nitride, Teos, or Low Temperature Thermal Anneals, we have flanges to meet your requirements.

Our unique internal water cooling design allows our flanges to sustain process temperatures up to 1000°C while requiring low water flows of 2-15 GPH accordingly. For low temperature applications, below 400°C, our flanges do not require cooling.

Each vacuum flange incorporates two o-rings and a spacer ring to increase the contact surface area on the quartz process tube. Using a backing ring to compress, the o-rings create a solid vacuum seal that ensures leak integrity, as well as reduce stress on the process tube. Since we compress on the last two inches of the process tube, our design eliminates flanges rolling off. Also included in each vacuum flange is a bumper o-ring to reduce quartz chipping on the ends of the tube during installation.



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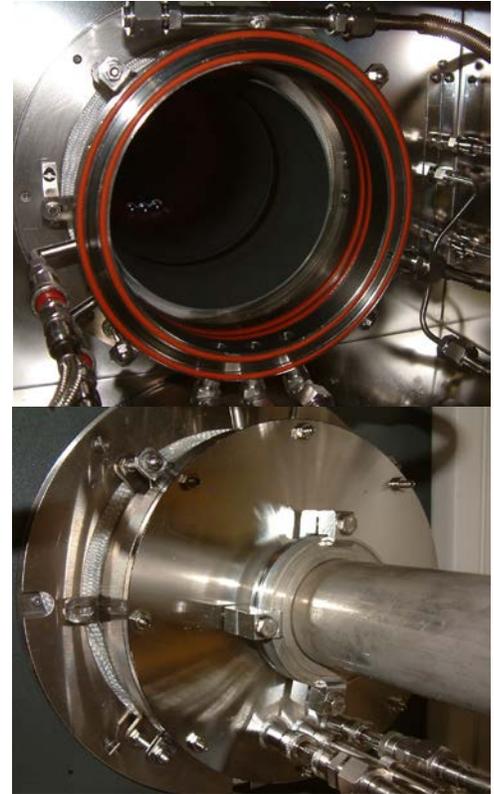
VACUUM END CAP FLANGES

INVAC SYSTEMS builds vacuum flanges for single ended or open ended quartz process tubes on horizontal furnaces that range in size from 50mm to 420mm in diameter.

Each flange assembly will be custom designed to meet your gas, vacuum, and water requirements.

Our front vacuum flanges can connect to process baratrons, multiple gas injection lines, and water cooling lines. We also have available our stainless steel gas injectors and port plugs.

Our rear vacuum flanges can either be closed or use a removable back plate. Multiple gas injection lines, TC ports, and various sizes of vacuum connections can be added. We offer a full range of Swagelok VCR®, VCO®, Ultra-Torr®, tube, and pipe seal fitting end connections for reliable, leak-tight performance. We can connect to all NW, CF, ISO, and ASA vacuum seals to maintain your pumping efficiency.



HAVING TROUBLE WITH DOOR SEALS?

Try our VLD (Vacuum Locked Door) designed front flanges. Our VLD systems are widely used to prevent leaks on H2 Anneal system with burn-offs, and all LPCVD systems to increase your process integrity by eliminating O2 leaks. We use a dual o-ring and vacuum channel layout that allows a vacuum to be pulled on the door, locking it in place. Using a combination of isolation valves and a digital convectron gauge, you can monitor and control your doors performance. No separate vacuum pumps are required; simply connect to your existing pumping assembly.



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