

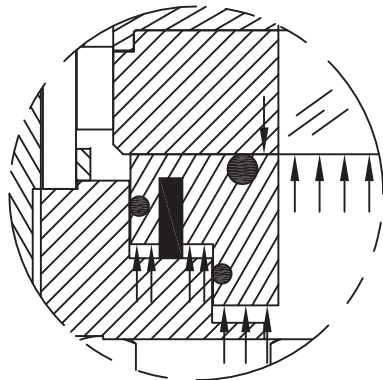
QUICKPORT™ CLOSURE OPERATION

UNDER **VACUUM** THE SEAL RING BOTTOMS OUT AND THE DOOR IS DRAWN DOWN ONTO THE O-RING TO CREATE THE SEALING FORCE.

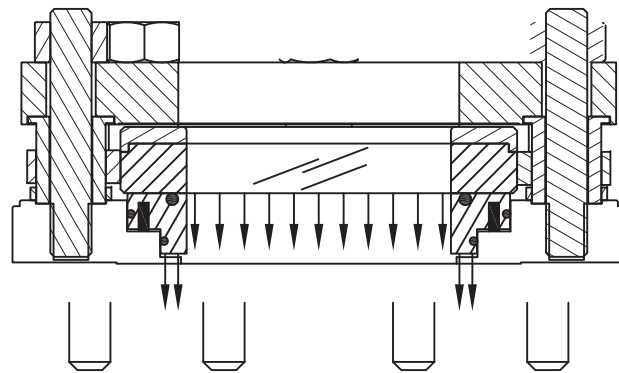
UNDER **POSITIVE PRESSURE** THERE IS A GREATER FORCE PUSHING THE SEAL RING TOWARD THE DOOR THEN AWAY FROM IT, DUE TO THE DIFFERENCE IN AREA. THIS FORCE PUSHES THE SEAL RING AND DOOR AGAINST THE RETAINER AND FORMS THE NECESSARY SEALING FORCE ON THE O-RING. AS THE PRESSURE INCREASES THIS FORCE BECOMES EVEN GREATER, PROVIDING A BETTER SEAL.

UNDER **POSITIVE PRESSURE** AND **SELF PRESSURIZATION** THE QUICKPORT CAN BE PRESSURIZED AND SEALED INDEPENDENT OF PROCESS PRESSURE. AN 1/8" FNPT ALLOWS PLANT AIR OR OTHER AVAILABLE FLUID TO PRESSURIZE THE AREA OF THE SEAL RING BETWEEN THE TWO BOSS O-RINGS. THIS PRESSURIZES AND SEALS THE QUICKPORT REGARDLESS OF PROCESS PRESSURE. TYPICALLY A PRESSURE OF 90 TO 120 PSI IS RECOMMENDED BUT EVEN A LOWER PRESSURE WILL SUPPLY ADDITIONAL SEALING FORCE. WHEN THIS PRESSURE IS SUPPLIED IT WILL FORCE THE SEALRING UP AGAINST THE DOOR AND THEN AGAINST THE RETAINER WHICH WILL SEAL THE UNIT UNDER POSITIVE OR NEGATIVE PROCESS PRESSURE AS WELL AS NO PRESSURE. THIS OPTION ALSO ACTS AS A LOCKING MECHANISM SO THE QUICKPORT CANNOT BE OPENED WHEN THE UNIT IS SELF PRESSURIZED. IT IS RECOMMENDED THAT A VALVE BE INSTALLED SO THE UNIT CAN BE PRESSURIZED WITH THE AVAILABLE FLUID AND THEN BE CLOSED TO MAINTAIN THE PRESSURE. THE SELF PRESSURIZED FLUID IS CONTAINED IN THE SMALL SPACE BETWEEN THE O-RINGS AND NEVER ENTERS THE PROCESS.

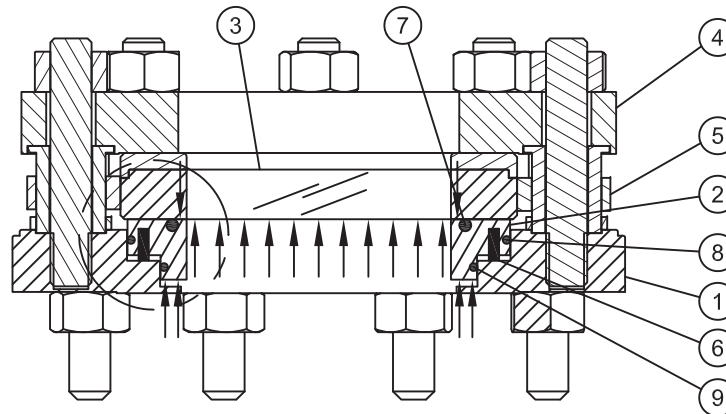
AT **LOW PRESSURE** THE STAINLESS STEEL PRELOAD PUSHES THE SEAL RING AND DOOR AGAINST THE RETAINER WHICH CREATES THE NECESSARY SEALING FORCE ON THE O-RING.



**POSITIVE PRESSURE
WITH
SELF PRESSURIZATION**



VACUUM



POSITIVE PRESSURE

BILL OF MATERIALS

ITEM	DESCRIPTION
1	BASE
2	SEAL RING
3	FUSEVIEW / DOOR
4	RETAINER
5	HINGE
6	PRELOAD
7	O-RING
8	O-RING
9	O-RING

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APPROVAL RFM	DATE 12-JUL-94	TITLE QUICKPORT CLOSURE OPERATION OVERVIEW				
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QUALITY CONTROL I.O.A.	DATE					
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