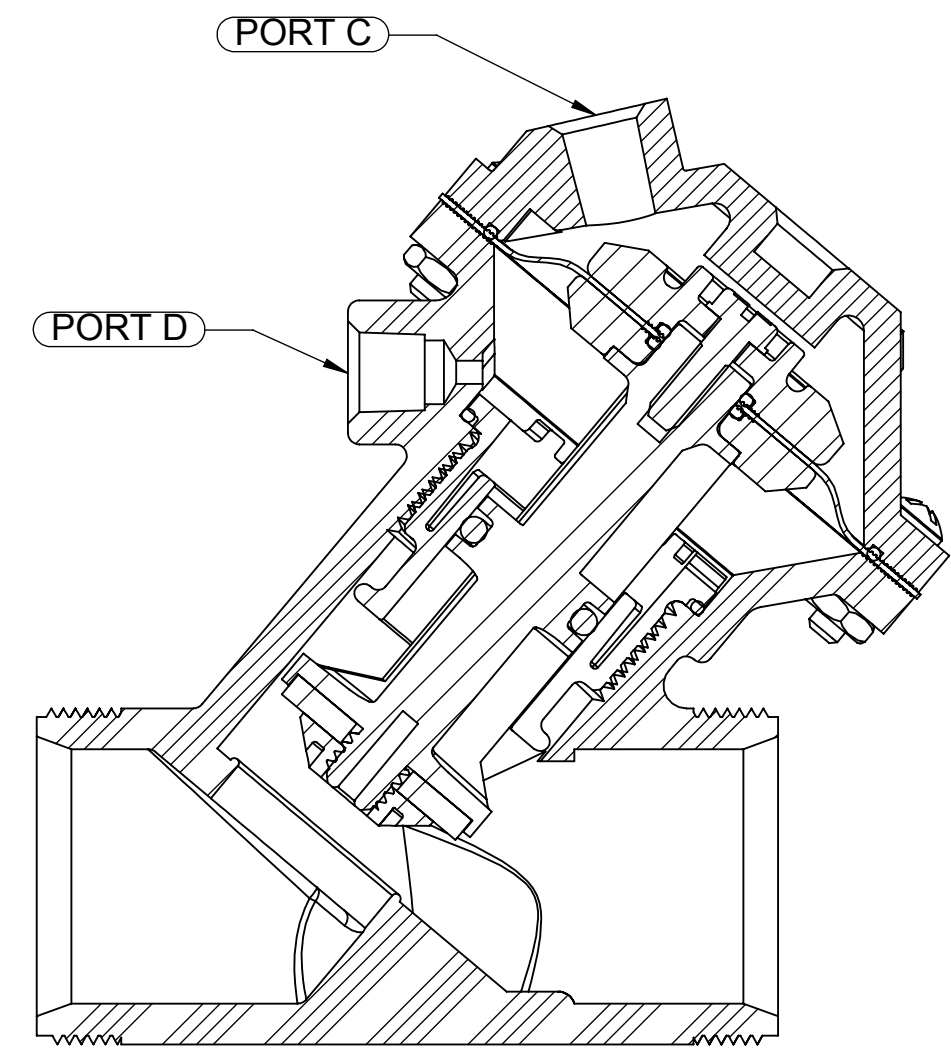
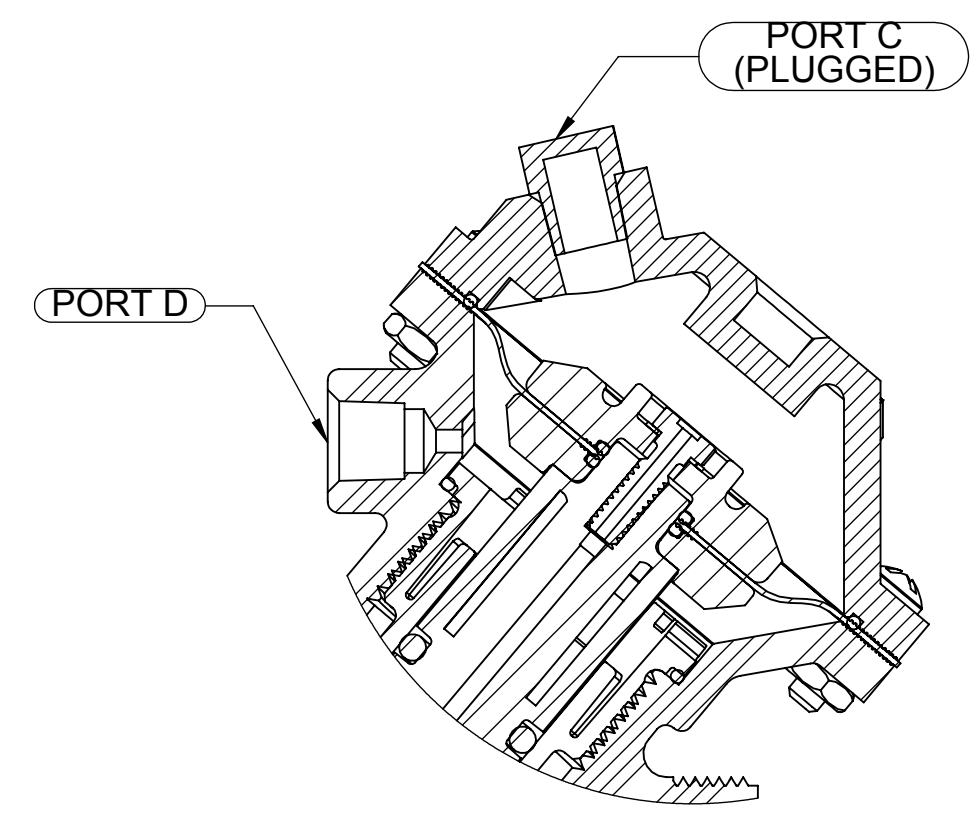


REVISIONS				
ECN	REV.	DESCRIPTION	DATE	APP'D
1507	C	TRANSFER TO AQ TEMPLATE	05/20/19	KJB



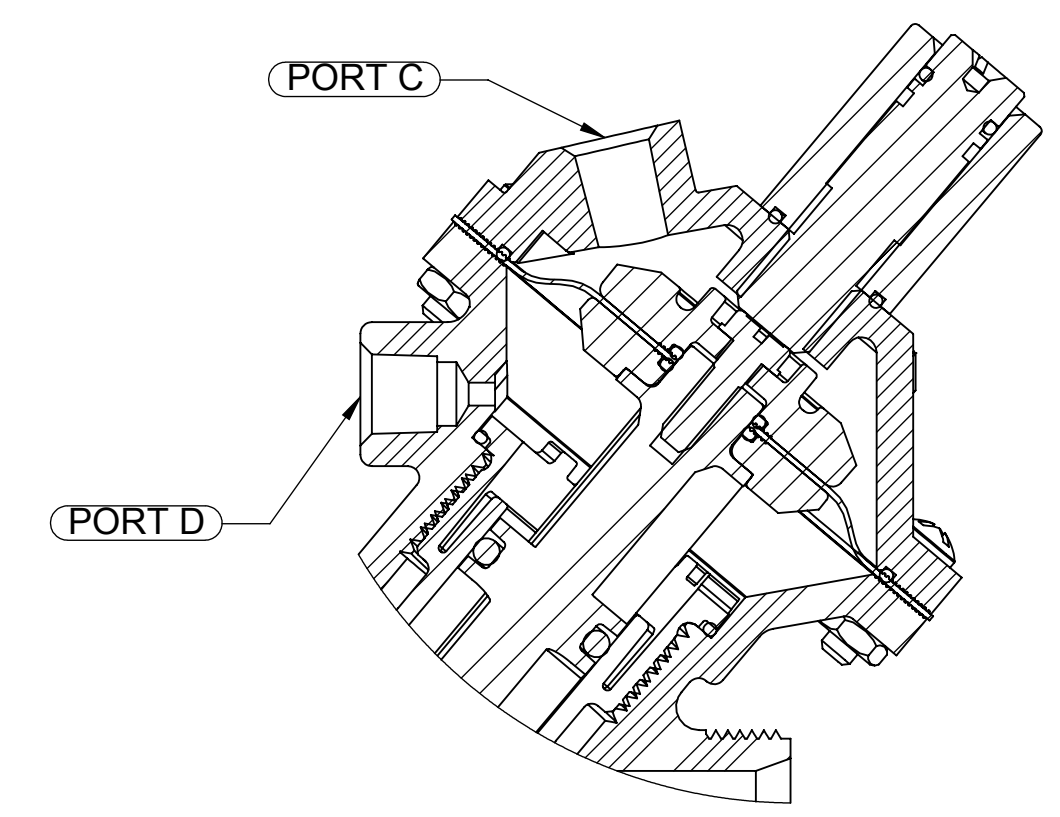
NORMALLY OPEN

LINE PRESSURE/FLOW AGAINST THE VALVE SEATING DISC WILL OPEN THE VALVE. CONTROL PRESSURE APPLIED TO THE TOP OF THE DIAPHRAGM (PORT "C") WILL CLOSE THE VALVE.



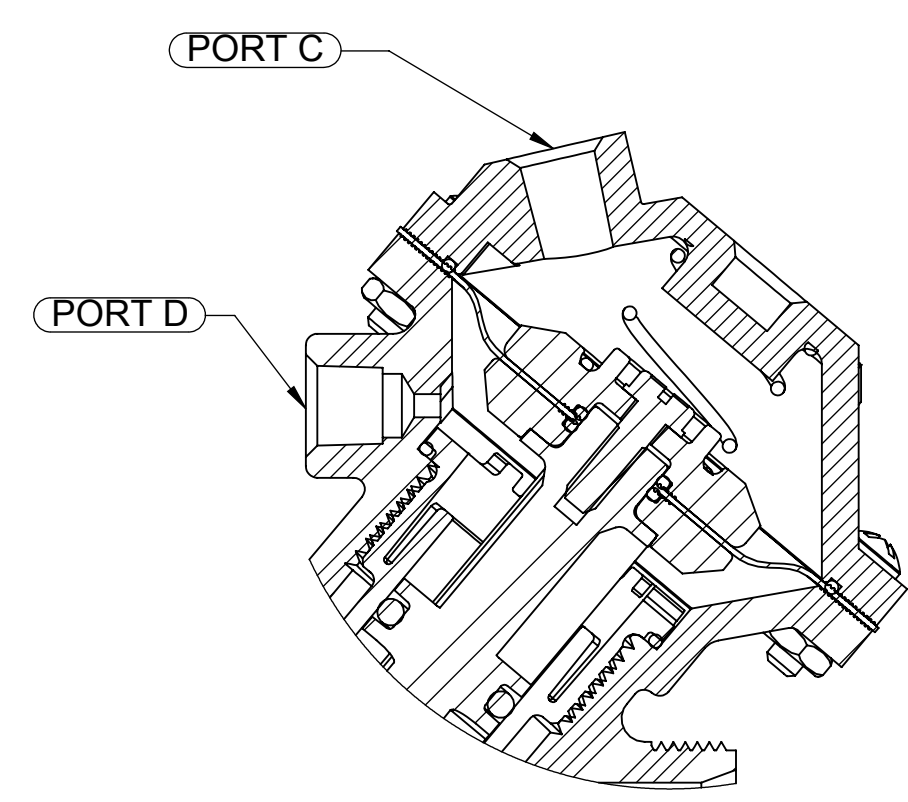
NORMALLY CLOSED

LINE PRESSURE AGAINST THE DISC, TRANSFERRED THRU THE VALVE'S HOLLOW SHAFT TO THE TOP OF THE DIAPHRAGM, WILL CLOSE THE VALVE. CONTROL PRESSURE AT PORT "D" WILL OPEN THE VALVE. ADDITION OF "SPRING ASSIST CLOSED" FEATURE IS RECOMMENDED FOR THE FOLLOWING CONDITIONS:
 1. LOW PRESSURE AND/OR FLOW.
 2. VALVE DISCHARGES TO ATMOSPHERE



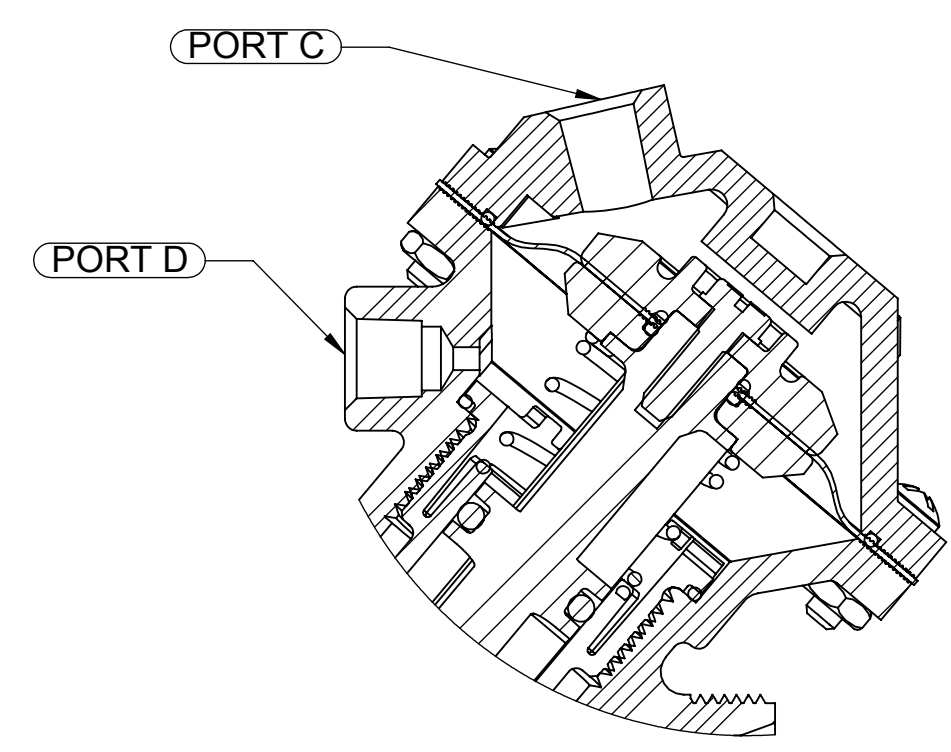
LIMIT STOP

INCLUDES AN ADJUSTMENT SCREW WHICH LIMITS THE VALVE STROKE. MAY BE USED TO CONTROL FLOW RATE, HOWEVER, FLOW RATE WILL VARY WITH CHANGES IN PRESSURE.



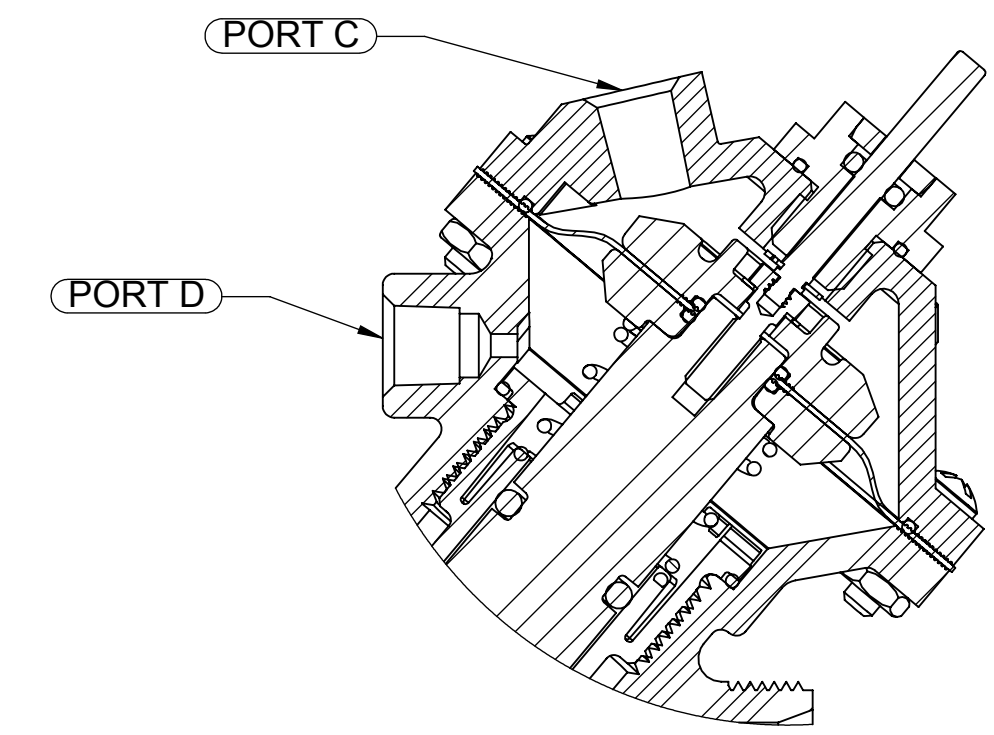
SPRING ASSIST CLOSED

SPRING SERVES AS AN ASSIST TO ASSURE FULL VALVE LOSURE IN THE ABSENCE OF LINE AND CONTROL PRESSURES.



SPRING ASSIST OPEN

SPRING SERVES AS AN ASSIST TO ASSURE FULL VALVE OPENING IN THE ABSENCE OF LINE AND CONTROL PRESSURES. (STANDARD ON SERIES 520 VALVES).



POSITION INDICATOR

INDICATOR ROD IS ATTACHED TO MAIN VALVE STEM TO SHOW POSITION OF VALVE. ONLY AVAILABLE WITH SPRING ASSIST OPEN OPTION.

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DO NOT SCALE DRAWING. DIMS. ARE IN INCHES [mm]. INTERPRET DIMS AND TOLERANCES PER ASME Y14.5M -1994 UNLESS OTHERWISE SPECIFIED: CORNER FILLETS R.005-.020 [1.27-5.08] TOLERANCES: ANGLES: ± 1° 1 PLACE .X: ± .015 [0.38] 2 PLACE .XX: ± .01 [0.3] 3 PLACE .XXX: ± .005 [0.13]		APPROVALS DRAWN KJB CHECKED BY APPROVED	DATE 05/20/19	
K52 SERIES CONFIGURATIONS & BASIC INFORMATION				
SIZE	C	DWG NO.	1078147	REV. C
SCALE	SOLIDWORKS FORMAT SHEET 1 OF 2			

REVISIONS				
ECN	REV.	DESCRIPTION	DATE	APP'D
		SEE SHEET 1 FOR ALL CHANGES.		

PLASTIC DIAPHRAGM VALVES (520 THRU 526)

SERIES	PIPE SIZE	SEAT AREA IN. CM.	SEAT AREA SQ. IN. SQ. CM.	DIAPHRAGM AREA SQ. IN. SQ. CM.	TOTAL STROKE IN. CM.	DIAPHRAGM CHAMBER (VOLUME) CU IN CU CM	Cv*	Kv**	FLOW RATE		PRESSURE DROP	
									@ 10 FT./SEC (3 M./SEC.) NOTE 1	@ 20 FT./SEC (3 M./SEC.) NOTE 2	@ 10 FT./SEC (3 M./SEC.) NOTE 1	@ 20 FT./SEC (6 M./SEC.) NOTE 2
									GAL/MIN CU M/HR	GAL/MIN CU M/HR	PSI bar	PSI bar
520	1/2"	0.507	0.20	0.52	0.28	0.55	4.0	3.4	6.2	12.4	2.4	9.6
		1.28	1.30	3.35	0.71	9.00			1.4	2.8	0.16	0.66
521	1"	0.996	0.77	2.07	0.56	3.05	15.0	13.0	24	48	2.5	10.2
		2.52	4.96	13.35	1.42	49.90			5.4	10.8	0.17	0.7
524	1 1/2"	1.62	2.06	3.86	1.00	7.32	38.0	32.7	64	128	2.8	11.3
		4.11	13.28	24.89	2.54	119			14.4	28.8	0.19	0.78
526	2 1/2"	2.37	3.30	8.32	1.62	12.20	100.0	86.0	136	272	1.8	7.4
		6.01	28.38	53.66	4.11	200			31.0	62.0	0.12	0.51

* Cv - FLOWRATE (GAL./MIN.) OF WATER AT 60°F. AT 1 P.S.I PRESSURE DROP NOTE 1: MAXIMUM CONTINUOUS VELOCITY THROUGH THE VALVE.

**Kv - FLOWRATE (CU. M./HR.) OF WATER AT 15.5°C. AT 1 BAR PRESSURE DROP NOTE 2: MAXIMUM CONTINUOUS VELOCITY. EXTENDED SERVICE AT THIS VELOCITY MAY CAUSE CAVITATION

TO DETERMINE FLOWRATE AT ANY GIVEN PRESSURE DROP, THE FOLLOWING FORMULAS CAN BE USED.

FOR WATER AND LIQUIDS:

$$Q = \frac{Cv \sqrt{\Delta P}}{\sqrt{e}}$$

Q - FLOWRATE IN GAL./MIN.
 ΔP - PRESSURE DROP (LB./SQ. IN.)
 e - SPECIFIC GRAVITY (WATER = 1.00)

FOR AIR AND GAS:

WHEN P2 < .5P1

$$Q = \frac{CFM \sqrt{e}}{.5P1}$$

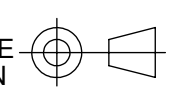

WHEN P2 > .5P1

$$Q = \frac{CFM \sqrt{e}}{\sqrt{\Delta P P2}}$$

CFM - CU. FT./MIN. FLOW
 e - SPECIFIC GRAVITY (AIR = 1.00)
 P1 - INLET PRESSURE (LB./SQ. IN.)
 P2 - OUTLET PRESSURE (LB./SQ. IN.)

THE DATA PRESENTED HERE IS BELIEVED TO BE RELIABLE AND OFFERED AS SUGGESTION ONLY. ACTUAL RESULTS MAY VARY DEPENDING UPON APPLICATION

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	APPROVALS	DATE	K52 SERIES CONFIGURATIONS & BASIC INFORMATION SIZE C DWG NO. 1078147 REV. C	
	DRAWN KJB	05/20/19		
	CHECKED BY			
APPROVED		SCALE	SOLIDWORKS FORMAT SHEET 2 OF 2	