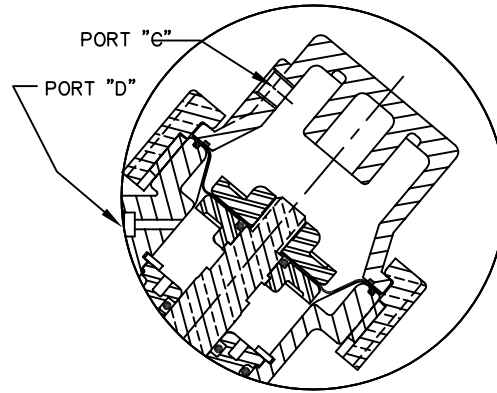


NORMALLY OPEN

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.

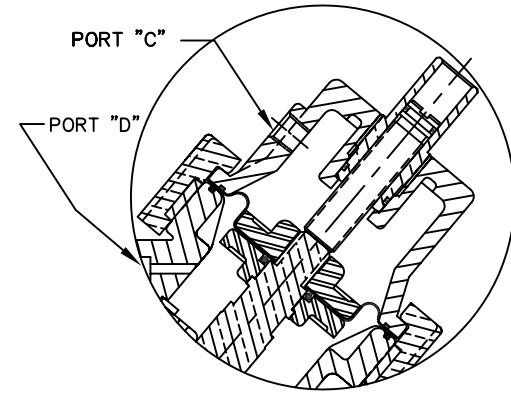


NORMALLY CLOSED

LINE PRESSURE AGAINST THE DISC, TRANSFERRED THRU AN EXTERNAL LINE TO PORT "C" AT 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:

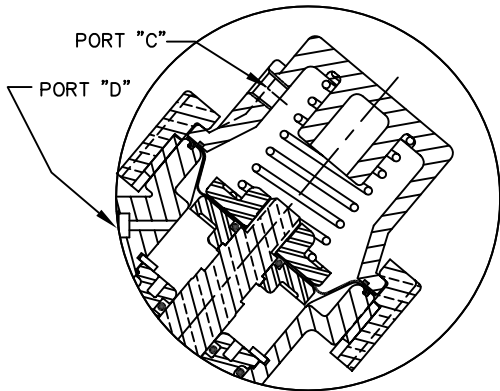
1. LOW PRESSURE AND/OR FLOW.
2. VALVE DISCHARGES TO ATMOSPHERE.

NORMALLY CLOSED FEATURE NOT RECOMMENDED FOR LINE MEDIA CONTAINING SOLIDS, HIGH TEMPERATURES OR OTHER MEDIA CONDITIONS WHICH MAY DAMAGE THE DIAPHRAGM.



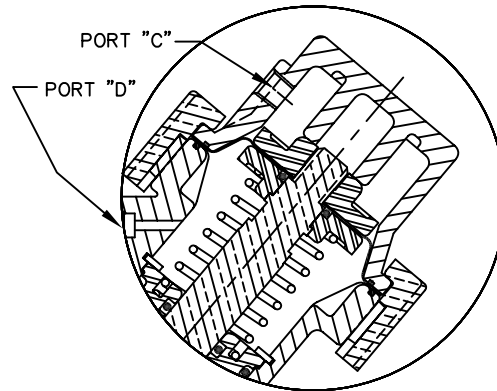
LIMIT STOP

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.



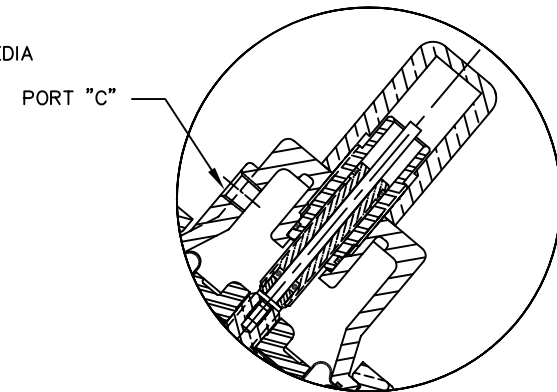
SPRING ASSIST CLOSED

SPRING SERVES AS AN ASSIST TO ASSURE FULL VALVE CLOSURE 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.



POSITION INDICATOR

INDICATOR ROD IS ATTACHED TO MAIN VALVE STEM TO SHOW POSITION OF VALVE. ONLY AVAILABLE WITH COMBINATION OF SPRING ASSIST AND LIMIT STOP OPTIONS.

FORM NO. 1078165

		16605 West Victor Rd New Berlin, WI 53151 262-326-0100 www.aq-matic.com	
		SERIES 530 DIAPHRAGM VALVES	
SCALE	DRAWN	DATE	DWG. NO.
N/A	JWB	15JUN01	1084006

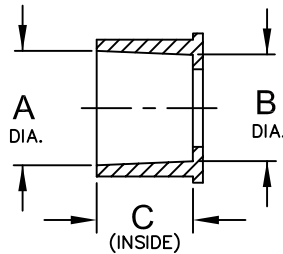
NUMBER	CONVERSION	1588	MSM	27NOV02	
REV	DESCRIPTION	ECO	DWN	DATE	APVD

PLASTIC DIAPHRAGM VALVES (531 THRU 537)

SERIES	PIPE SIZE	SEAT		DIAPHRAGM AREA	TOTAL STROKE	DIAPHRAGM CHAMBER (VOLUME)	* Cv	** Kv	FLOW RATE		PRESSURE DROP	
		DIAMETER	AREA						@ 10 FT./SEC. (3 M./SEC.) NOTE 1	@ 20 FT./SEC. (6 M./SEC.) NOTE 2	@ 10 FT./SEC. (3 M./SEC.) NOTE 1	@ 20 FT./SEC. (6 M./SEC.) NOTE 2
		IN. CM.	SQ. IN. SQ. CM.	IN. CM.	CUBIC IN. CUBIC CM.	GAL./MIN. CU.M/HR	GAL./MIN. CU.M/HR	P.S.I. bar	P.S.I. bar			
531	3/4",1"	1.062	.89	3.43	.86	6.21	18.0	16.0	27.7	55.3	2.3	9.4
		2.70	5.73	22.1	2.18	102.0			6.3	12.6	0.16	0.65
534	1-1/2"	1.562	1.92	6.06	1.33	10.4	42.0	36.0	60	120	2.04	8.16
		3.97	12.4	39.1	3.38	170.0			13.6	27.2	0.14	0.56
535	2"	2.062	3.34	8.82	1.75	25.3	84.0	72.0	104	208	1.53	6.13
		5.24	21.5	56.9	4.45	414.0			23.4	46.8	0.11	0.42
537	3"	3.062	7.36	15.6	2.50	65.3	200.0	172.0	230	460	1.32	5.3
		7.78	47.5	101.0	6.35	1070			52.2	104.4	0.09	0.36

* Cv – FLOWRATE (GAL./MIN.) OF WATER AT 60° F. AT 1 P.S.I. PRESSURE DROP
 ** Kv – FLOWRATE (CU. M./HR) OF WATER AT 15.5° C. AT 1 BAR PRESSURE DROP

NOTE 1: MAXIMUM CONTINUOUS VELOCITY THROUGH THE VALVE.
 NOTE 2: MAXIMUM CONTINUOUS VELOCITY. EXTENDED SERVICE AT THIS VELOCITY MAY CAUSE CAVITATION.



FEMALE SOCKET WELD END CONNECTOR KITS

VALVE SERIES	STANDARD	PART NO.	DIAMETER A	DIAMETER B	DEPTH C
531	A.S.T.M. 3/4"	1070411 (K531-577)	1.062"	1.050"	1.18"
	A.S.T.M. 1"	1070412 (K531-060)	1.330"	1.312"	1.18"
	J.I.S. 25MM	1070413 (K531-061)	1.282"	1.234"	1.18"
	I.S.O. 25MM	1070414 (K531-062)	1.269"	1.269"	1.18"
534	A.S.T.M. 1-1/2"	1070419 (K534-060)	1.920"	1.81"	1.37"
	J.I.S. 40MM	1070420 (K534-061)	1.895"	1.829"	1.36"
	I.S.O. 40MM	1070421 (K534-062)	1.978"	1.955"	1.36"
535	A.S.T.M. 2"	1070425 (K535-060)	2.393"	2.341"	1.50"
	J.I.S. 50MM	1070426 (K535-061)	2.392"	2.274"	1.50"
	I.S.O. 50MM	1070427 (K535-062)	2.493"	1.931"	1.50"
537	A.S.T.M. 3"	1070431 (K537-060)	3.522"	3.492"	1.95"
	J.I.S. 80MM	1070432 (K537-061)	3.537"	3.470"	1.95"
	I.S.O. 75MM	1070433 (K537-062)	3.557"	3.535"	1.95"

NOTE: ALL CONNECTOR KITS CONTAIN (2) CONNECTORS, (ONE KIT REQ'D PER VALVE)

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

FOR WATER AND LIQUIDS:

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

FOR AIR AND GAS:

WHEN P2 < .5P1	WHEN P2 > .5P1
$C_v = \frac{CFM \sqrt{e}}{.5P1}$	$C_v = \frac{CFM \sqrt{e}}{\sqrt{\Delta P P2}}$

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

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.



FORM NO. 1078165

SERIES 530 DIAPHRAGM VALVES

B	NUMBER CONVERSION	1588	MSM	27NOV02	SCALE	DRAWN	DATE	DWG. NO.
REV	DESCRIPTION	ECO	DWN	DATE	N/A	JWB	14JUN01	1084006