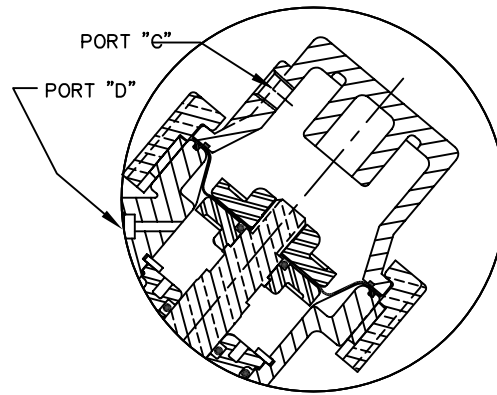


NORMALLY OPEN

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.

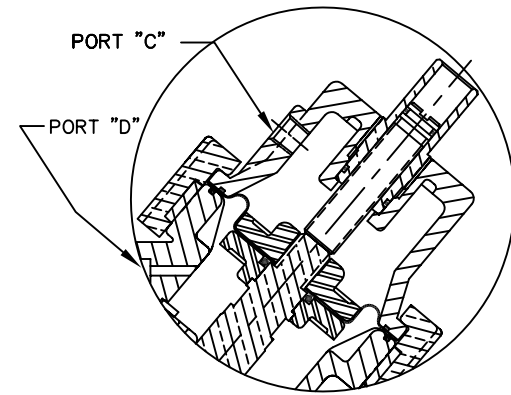


NORMALLY CLOSED

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:

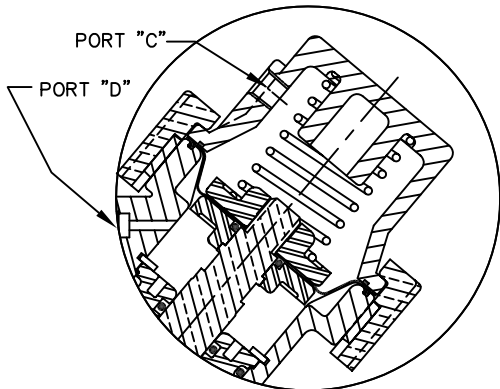
1. LOW PRESSURE AND/OR FLOW.
2. VALVE DISCHARGES TO ATMOSPHERE.

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



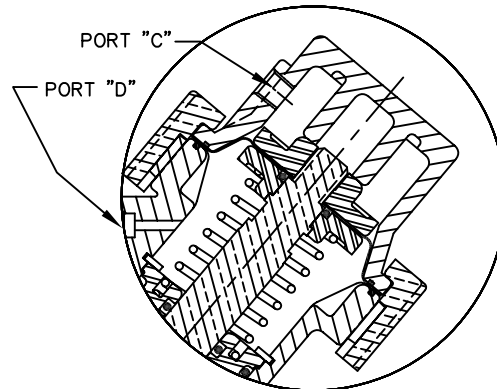
LIMIT STOP

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.



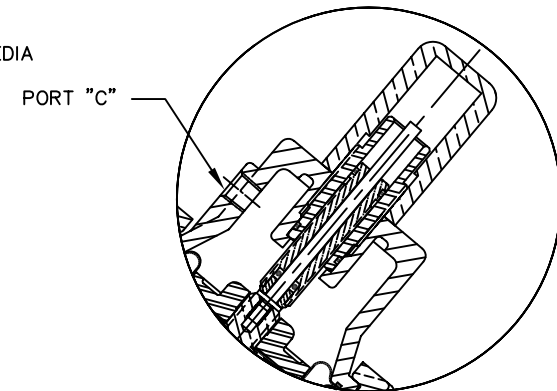
SPRING ASSIST CLOSED

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



20580 Enterprise Avenue
 Brookfield, WI 53045
 888.784.9065
 www.Pentairwatertreatment.com

SERIES 530 DIAPHRAGM VALVES

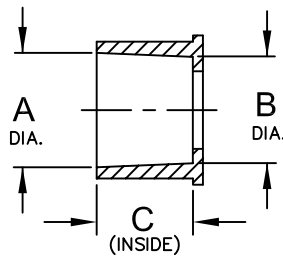
NUMBER	CONVERSION	1588	MSM	27NOV02	SCALE	DRAWN	DATE	DWG. NO.
REV	DESCRIPTION	ECO	DWN	DATE	N/A	JWB	15JUN01	1084006

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.	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.

	20580 Enterprise Avenue Brookfield, WI 53045 888.784.9065 www.Pentairwatertreatment.com			
	SERIES 530 DIAPHRAGM VALVES			
FORM NO. 1078165	SCALE N/A	DRAWN JWB	DATE 14JUN01	DWG. NO. 1084006

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