# UNIQUE SYSTEMS®

INCORPORATED ONE SADDLE ROAD - CEDAR KNOLLS, NEW JERSEY 07927-1998 Phone 973-455-0440 Fax 973-455-7214



## MODEL # 2VCD-20B VACUUM CONDENSATE DRAINER CATALOG SPECIFICATION SHEET

BULLETIN # PVS-80020201-VCD

#### **TECHNICAL REFERENCES**

Dwg. # 502776 – Outline Drawing Dwg. # 502777 – Recommended Drainer Valve Piping GA Dwg. # 502293 – Vacuum Drainer Installation Diagram

Note:

Refer to system IO&M manual for integrated operation with the vacuum system.



VACUUM CONDENSATE DRAINER					
MODEL #		2VCD-20B			
PART #		502720			
FLOW RANGE		0-7,000 LB/HOUR VARIABLE FLOW			
APPLICATION		STEAM VACUUM SERVICE, STEAM CONDENSATE			
ΔΡ		2 PSI [4.1" Hg]			
CONNECTIONS		2" NPT IN/OUT, 1/2" NPT VENT/DRAIN			
CONSTRUCTION		CS BODY, SS INTERNALS			
ITEM	DESCRIPTION	PART NO.	QUANTITY	MATERIAL	SPEC.
1	Drain Chamber	502721	1	CS	A513
2	Inlet Cover (Top)	502722	1	CS	C1018
3	Outlet Cover (Bottom)	502723	1	CS	C1018
4	Cover Gasket	502269	2	Aramid/Nitrile	BG3000
5	Ball Float	502724	1	SS	A316
6	Valve Stem	502725	1	SS	A416
7	Valve Poppet	502726	1	SS	A416
8	Valve Seat	502727	1	SS	A416
9	Limit Screw	90298A537	1	SS	A304 (18-8)
10	Stem O-Ring	9557K462	1	EPDM	D2000
11	Poppet O-Ring	9557K477	1	EPDM	D2000
12	Cap Screw	92196A542	16	SS	A304 (18-8)
13	Name Plate	502347	1	SS	A304
14	Flow Arrow	16055T237	1	Vinyl	
15	NPT Plug	4513K324	2	CS	A105
MECHANICAL DESIGN					
	DESIGN PRESSURE	15 PSIG + F.V.			
	DESIGN TEMPERATURE	200° F / -20° F			

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#### CAPACITY

The discharge capacity of Unique Systems' condensate drainer is variable by design from 0-7,000 #/hour of water, depending upon the differential pressure across the valve. Valve operation is completely automatic, self-adjusting to flow rates specific to vacuum system demands as necessary, without any operator intervention required. The design condensate flow rate specific to any particular ejector vacuum system can be found on the Condenser Data Sheet included with the Engineering Documentation Submittal package or the System IO&M Manual. Consult Unique Systems for more information, if required.

#### **INSTALLATION**

The drain valve should be installed in the vertical position, with the flow arrow on the valve body pointing down, underneath the vacuum condenser. The ideal position is as close to the drain return point as possible, insuring adequate elevation above the drain return connection. Piping to and from the valve should match the connection size on the valve. Interconnecting piping should never be smaller than the valve connection size. Unrestricted free-flow of condensate is critical to the valve's performance. For further details on valve installation reference Dwg. # 502293 Vacuum Condensate Drainer Installation Diagram. The diagram includes more specific information regarding recommended piping layout.

#### MAINTENANCE

Unique Systems' Vacuum Condensate Drainer is easy to maintain given the relatively few internal parts comprising the valve. Before beginning any maintenance or internal inspection of the drainer ensure that the valve is completely isolated from the process top and bottom. Also ensure that the valve is completely drained through the bottom drain port. The drainer should be disassembled periodically for inspection and cleaning of the valve seat. A Vacuum Condensate Drainer in good working order is critical to the performance and operation of the vacuum condenser and the vacuum system as a whole. Worn or damaged components should be replaced as soon as possible using 2VCD-20B Repair Kit (Part # 502720-99) in order to ensure proper operation of the valve and the vacuum condenser.

#### **SPARE PARTS**

For a complete listing of factory spare parts, please refer to Doc # 2VCD-20B-RSPL Recommended Spare Parts Listing.

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