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I. CORE AND BLANKET LOW-PRESSURE SYSTEMS

Nominal Valve Size - 1/2"

Connections - 1", 300 Lb. integral R.J. flange face

Design - 500 psi, 250°C, Bellows-sealed (Prototype D-18191)

Style - Straight Through

Trim Material - Stellite No. 6 Plug, Stellite No. 12 Seat

Vendor - Fulton Sylphon

Actuator - Area 50 Sq. In., 9/16" Stroke, Bellows Type

Vendor - The Annin Company, Drawing No. AD1451

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve C_v</u>	<u>Valve Serial</u>	<u>Remarks</u>
HCV-333	Close	20-27	10341-R	3.5	K-52	
HCV-335	Close	20-26	10341-R	3.5	K-01	
HCV-336	Close	20-27	10341-R	3.5	K-02	
HCV-337	Close	20-26	10341-R	5	K-03	
HCV-338	Open	13-21	10341-R	3.5	K-34	
HCV-339	Open	13-19	10341-R	3.5	K-05	
HCV-340	Close	20-27	10341-R	3.5	K-06	
HCV-341	Open	13-19	10341-R	3.5	K-07	
HCV-344	Close	20-26	10341-R	3.5	K-23	
HCV-434	Close	20-27	10341-R	3.5	K-48	
HCV-435	Close	20-26	10341-R	3.5	K-09	
HCV-436	Close	20-27	10341-R	3.5	L-99	
HCV-437	Close	20-27	10341-R	5	K-11	
HCV-438	Open	12-20	10341-R	3.5	K-12	
HCV-439	Open	12-20	10341-R	3.5	K-13	
HCV-440	Close	20-27	10341-R	3.5	K-14	

Inst. No.	Actuator Fail Action	Actuator Bench Pressure	Valve Drawing Number	Valve C _v	Valve Serial	Remarks
HCV-441	Open	12-19	10341-R	3.5	K-15	
HCV-444	Close	20-27	10341-R	3.5	K-47	
HV-728	None	None	10559-R	.1-1M		
HV-729	None	None	10559-R	.1-1M		
HV-730	None	None	10558-R	3.5	K-18	
HCV-731	Close	20-27.5	10341-R	3.5	K-19	
HCV-732	Close	20-27	10341-R	3.5	K-20	
HCV-733	Close	20-26	10341-R	3.5	K-21	
HCV-734	Close	20-26.5	10341-R	3.5	K-22	
HV-736	None	None	10558-R	3.5	K-24	
HV-738	None	None	10558-R	3.5	K-26	
HV-739	None	None	10558-R	3.5	K-27	
HV-740	None	None	10558-R	3.5		
HV-741	None	None	10558-R	3.5	L-76	
HV-742	None	None	10558-R	3.5	K-30	
HCV-743	Close	20-30	10341-R	3.5	K-31	Foxboro
TCV-786	Close	20-27	10341-R	3.5	K-33	
TCV-787	Close	20-28	10341-R	3.5	L-94	
TCV-788	Close	21-28	10341-R	3.5	K-35	
TCV-789	Close	20-26.5	10341-R	3.5	K-36	
HV-935	None	None	10558-R	3.5	K-56	

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve C_v</u>	<u>Valve Serial</u>	<u>Remarks</u>
HCV-936	Close	20-26	10341-R	3.5	K-38	
HCV-937	Close	20-27	10341-R	3.5	K-39	
HCV-938	Close	20-27	10341-R	3.5	K-40	
HCV-939	Close	20-27	10341-R	3.5	K-51	
HV-940	None	None	10558-R	3.5	K-41	
HV-941	None	None	10558-R	3.5	K-42	
HV-942	None	None	10558-R	3.5	K-43	
HV-729 Spare	None	None	10559-R	.1-1M	K-17	
HV-935 Spare	None	None	10558-R	3.5	K-32	
HCV-Spare			10341-R	3.5	L-93	
HCV-Spare			10341-R	3.5	L-95	
HV-Spare	None	None	10558-R	3.5	K-29	
HV-Spare	None	None	10558-R	3.5	K-44	Formerly HV-943
HV-Spare	None	None	10558-R	3.5	K-45	Formerly HV-944
HCV-Spare	Close		10341-R	3.5	K-49	
HCV-Spare	Open		10341-R	3.5	K-53	
HV-Spare	None	None	10558-R	3.5	K-37	
HV-Spare	None	None	10558-R	3.5	K-46	
HV-Spare	None	None	10558-R	3.5	K-25	
HV-Spare	None	None	10558-R	3.5	K-10	

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve Cv</u>	<u>Valve Serial</u>	<u>Remarks</u>
HV-Spare	None	None	10558-R	3.5	K-54	
HV-Spare	None	None	10558-R	3.5	K-55	
HV-Spare	None	None	10558-R	3.5	K-57	
HV-Spare	None	None	10558-R	3.5	L-59	
HV-Spare	None	None	10558-R	3.5	K-59	
HV-Spare	None	None	10558-R	3.5	L-60	
HV-Spare	None	None	10559-R	.1-1M	K-60	
HV-Spare*	None	None	95610-11	3.5	K-61	
HV-Spare*	None	None	95610-11	3.5	K-62	
HV-Spare*	None	None	95610-11	3.5	K-63	
HV-Spare*	None	None	95610-11	3.5	K-64	
HV-Spare*	None	None	95610-11	3.5	K-65	

*HRE Spares on hand, fitted with handwheels. Connections
1/2" Sch. 80 weld nipples, 6" length. Straight thru style
body.

II. CORE AND BLANKET HIGH-PRESSURE SYSTEMS

Nominal Valve Size - 1/2"
 Connections - Butt-weld, 1/2" Sch. 80 Pipe
 Design - 2500 psi., body 500 psi., 250°C Bellows
 (Prototypes D-18229, D-18230)
 Style - Angle

Trim Material - Stellite No. 6 Plug, Stainless Steel #347 seat,
 except PCV-152 and PCV-152-Spare which has
 Stainless Steel 347 Plug and Seat
 Vendor - Fulton Sylphon
 Actuator - Area 50 Sq. In., 9/16" Stroke, Bellows Type
 Vendor - The Annin Company, Drawing No. AD1451

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve Cv</u>	<u>Valve Serial</u>	<u>Remarks</u>
LCV-145	Close	12-26	10717-R	.04-.1	L-98	Formerly No. K-74, 17-4 PH
PCV-152	Open*	50 Loading 55 Actuating	10716-R	4	K-67	
LCV-245	Close	12-25	10717-R	.04-.1	L-92	17-4 PH
PdCV-250A	Close	12-25	10717-R	.35	K-69	
PdCV-250B	Open	9-23	10717-R	.35	K-70	
PCV-252	Open*	50 Loading 55 Actuating	10719-R	10	K-73	
LCV-145-Spare	Close		10717-R	Special	K-74	
PCV-152-Spare	Open*		10716-R	4	K-72	
LCV-245-Spare	Close		10717-R	Special .01	K-68	
PCV-252-Spare	Open*		10719-R	10	K-71	
PdCV-250A-Spare	Close		10717-R	.07M	K-75	
PdCV-250B-Spare	Open		10717-R	.07M	K-76	
HCV-Spare	Open**	60 psi	11773-R	10-12	L-86	Formerly Pressure Balance Valve
HCV-Spare	Open**	60 psi	11773-R	10-12	L-87	Formerly Pressure Balance Valve

* 68 sq. in. Actuator, 3/4" Stroke, Bellows Type, Fulton Sylphon Drawing No. 11301-R

** 40 sq. in. Actuator, Bellows Type, Fulton Sylphon Drawing No.

Note: PCV-252 and PCV-252-Spare have 1", Sch. 80 Butt-weld connection.

III. CORE AND BLANKET HIGH-PRESSURE SYSTEMS

Nominal Valve Size - 1/8"
 Connections - Butt-weld, 1/2" Sch. 80 Pipe
 Design - 2500 psi, 300°C, Body 2000 psi, 300°C, Bellows
 Style - Angle

Trim Material - Stellite No. 6 Plug, Stainless Steel No. 347
 seat except HCV-141, -142, -241, and -242 which
 have stainless steel 347 plugs and seats

Vendor - Fulton Sylphon
 Actuator - Annin

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve C_v</u>	<u>Valve Serial</u>	<u>Remarks</u>
HCV-134	Close		11057-R	.3	K-90	Fuel Stainless Steel Trim
HV-135*	None	None	10895-R	.3	K-78	
HCV-136	Close	39-44	10761-R	.02	K-94	
HCV-138	Close	39-44	10762-R	.3	K-80	
HCV-139	Close	39-44	10762-R	.3	K-81	
HCV-141	Close	39-44	11057-R	.3	K-83	
HCV-142	Close	39-44	11057-R	.3	K-84	
HV-143*	None	None	10895-R	.3	L-77	
HCV-234	Close		11057-R	.3	K-91	Blanket Stainless Steel Trim
HV-235*	None	None	10895-R	.3	K-85	
HCV-236	Close	39-44	10761-R	.02	K-86	
HCV-238	Close	38-44	10762-R	.3	K-87	
HCV-239	Close	39-44	10762-R	.3	K-88	
HV-243*	None	None	10895-R	.3	L-78	
FCV-315			Q-1546-1B Thermal II		20	
FCV-316	Close	39-44	D-27871		L-96	
HV-342*	None	None	10895-R	.3	L-79	

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve C_v</u>	<u>Valve Serial</u>	<u>Remarks</u>
HV-343*	None	None	10895-R	.3	K-08	
FCV-415			Q-1546-1B Thermal II		19	
FCV-416	Close		D-27871		L-97	
HV-442*	None	None	10895-R	.3	L-80	
HV-443*	None	None	10895-R	.3	K-16	
PCV-5000	Close	42-48	10762-R	.3	K-92	
HV-135-Spare	None	None	10895-R	.3	L-63	
HCV-136-Spare	Close		10761-R	.02	K-93	
HCV-141-Spare	Close		11057-R	.3	L-65	
HCV-142-Spare	Close		11057-R	.3	L-66	
HV-235-Spare*	None	None	10895-R	.3	L-64	
HCV-236-Spare	Close	40-46	10761-R	.02		
HCV-241-Spare	Close		11057-R	.3	L-67	
HCV-242-Spare	Close		11057-R	.3	L-68	
HV-343-Spare*	None	None	10895-R	.3	L-61	
HV-443-Spare*	None	None	10895-R	.3	L-62	
HCV-Spare	Close	39-43	10762-R	.3	K-95	
HCV-Spare	Close	39-43	10762-R	.3	K-96	
HCV-Spare	Close		10762-R	.3	K-89	
HCV-Spare	Close		10762-R	.3	K-82	
HCV-Spare	Close		10762-R	.3	K-97	
HCV-Spare	Close		10762-R	.3	K-98	

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Drawing Number</u>	<u>Valve Cv</u>	<u>Valve Serial</u>	<u>Remarks</u>
HCV-Spare	Close		10762-R	.3	K-99	

*Autoclave end fittings, straight-thru body style.

IV. STEAM SYSTEM CONTROL VALVES

Connections - 1", 1500 lb. Ring-Joint Flange, unless otherwise indicated

Vendor - Air operated Valves - The Hammel-Dahl Company

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Cv</u>	<u>Valve Serial</u>	<u>Remarks</u>
HCV-536A	Air to Open Positioner	22 psi	100	L-01	
HCV-536B	Air to Open Positioner	22 psi	10	L-02	
HCV-537	Close	80 psi	160	L-03	
HCV-538	Close	80 psi	160	L-04	
HCV-539	Close	22 psi	10	L-05	
HCV-540	Close	22 psi	10	L-06	
HCV-541	Close	22 psi		L-07	
LCV-545	Air to Open Positioner	22 psi	6.3	L-08	
LCV-546	Air to Open Positioner	22 psi	.25	L-09	
LCV-548	Air to Open Positioner	22 psi	6.3	L-10	
PCV-552A	Air to Open Positioner	3-9 psi	4	L-11	
PCV-552B	Air to Open Positioner	8-15 psi	4C	L-12	
PV-557*		Self		L-17	
PCV-559	Air to Close Positioner	22 psi	6.3	L-14	
FCV-814A	Air to Open	22 psi	3.5	L-88	Foxboro

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve Cv</u>	<u>Valve Serial</u>	<u>Remarks</u>
FCV-814B	Air to Open	22 psi	3.5	L-89	Foxboro
PCV-849	Air to Close	40 psi	40	L-85	
T _d CV-6520A	Air to Open	8-15 psi	1.6	L-15	
T _d CV-6520B	Air to Open	3-9 psi	.10	L-16	
FCV-814-Spare*	Air to Open	22 psi	3.5	L-20	Foxboro
FCV-Spare*		22 psi	3.5	L-18	
FCV-Spare*		22 psi	3.5	L-19	

* Spare Trim (plug and seat) will be stocked for all other valves.

V. COOLING WATER VALVES

Vendor - G. W. Dahl Company and Hammel-Dahl Company

Body Style - Straight thru

Actuation - Pneumatic, 20 psig

<u>Inst. No.</u>	<u>Actuator Fail Action</u>	<u>Actuator Bench Pressure</u>	<u>Valve C_v</u>	<u>Valve Serial</u>	<u>Remarks</u>
FCV-635	Close	3-15 psi	160	L-91	Continuously connected handwheel 4"
LCV-649	Close	12-30 psi	40	L-90	Mason-Neilan Co. 2"
HCV-835	Open	3-15 psi	10	43	Special spring
HCV-836	Open	3-15 psi	10	49	
FCV-927	Open		40	L-31	77X-56487
FCV-928	Close	3-15 psi	100	L-36	
FCV-929	Open	3-15 psi	40	L-29	
FCV-930	Open	3-15 psi	40	L-30	
FCV-932	Open	3-15 psi	40	L-32	
FCV-933	Close	3-15 psi	160	L-35	
FCV-934	Close	3-15 psi	100	L-34	
HCV-Spare*	Open	3-15 psi	10	L-28	77X-56487
HCV-Spare*	Open	3-15 psi	10	L-27	

* Spare trim to be stocked for larger valves.

VI. AIR LINE RELIEF VALVES

Connections - Inlet 3/4" N.P. Male

Outlet - Outlet 3/4" N.P. Female

HRT Inst. No. Prefix PV-

Body Style

Serial No. L-40 thru L-44 adjustable 18-30 psi

Serial No. L-45 thru L-47 adjustable 35-50 psi

Serial No. L-48 and L-49 adjustable 50-70 psi

Serial No. L-73, L-74, L-75 adjustable 90-110 psi

VII. MISCELLANEOUS VALVES

Pneumatic Actuation, 20 psi

Inst. No.	Line No.	Body Style	Connection	Valve Serial	Remarks
PCV-949A	545	Straight Thru	2" I.P.T.	L-50	
PCV-949B	543	Straight Thru	2" I.P.T.	L-51	
PCV-949C	625	Straight Thru	2" I.P.T.	L-52	
HCV-925A	598	Straight Thru	3" I.P.T.	L-81	
HCV-925B	599	Straight Thru	3" I.P.T.	L-82	
HCV-925C	679	Straight Thru	3" I.P.T.	L-83	
PCV-5030		Straight Thru	1/2" Sch. 80 Pipe, male thread	L-72	
HCV-Spare			2" I.P.T.	L-69	
HCV-Spare			2" I.P.T.	L-70	
HCV-Spare			2" I.P.T.	L-71	
HCV-Spare			3" I.P.T.	L-84	

VIII. AIR LINE BLOCK VALVES

End Connections - 3/8" Female Pipe Thread
Signal Connection - 1/4" Female Pipe Thread
Body Material - Naval Bronze
Seat - Integral
Disc - Neoprene
Pressure Rating - 500 psi
Actuator - Piston type with neoprene "O" rings integral with bonnet
Actuator Air Pressure - 80% of line pressure for tight shutoff
Valves to be installed with "in" connections to shield
Vendor - Airmatic Valve, Inc.

Serial Numbers begin with N-01 and continue through N-70, inclusive

Approximate Pressures PSI

	<u>Maximum</u>	<u>Average</u>	<u>Minimum</u>
Applied to inlet	100	94	88
Signal pressure for shutoff	64	51.5	39
Applied to outlet	100	96.5	93
Signal pressure for shutoff	80	65.5	51