		SUP	PLY AI	R V	ALVE	S SE	RVIN	IG C	AFE (E	XIST	ΓΙΝΟ	3)			
DESIG	GNATION	SERVICE	AIR	QUANTI	TY (CFM)		ELOCITY PM)	VALVE SIZE (IN)	CONTROL	MAX. APD (IN	RATI	C NC NG @ S.P.	MANUFACTURER	MODEL	NOTES
EAV	NUM		MIN	MAX	UNOCC	MIN	MAX	()		WG)	DISC	RAD			
SAV	A1-09	SA A100, R-A102 - CAFE & BOH IU	445	445	300	550	820	10	DDC	0.50	35	35	PRICE	SDV	
SAV	A1-10	SA A100, R-A102 - CAFE & BOH VENT	450	450	300	550	830	10	DDC	0.50	35	35	PRICE	SDV	

			EXHAUST & R	ETU	RN	AIR	VAI	VE	SSE	RVING	CAF	E (E	EXIS	TING)		
DESIG	GNATION	PE	SERVICE	A	IR QUANT (CFM)	TITY	VELC	CCK DCITY PM)	VALVE SIZE	CONTROL	MAX. APD		C NC NG @ S.P.	MANUFACTURER	MODEL	NOTES
EAV	NUM	<u> </u>		MIN	MAX	UNO CC	MIN	MAX	(IN)		(IN WG)	DISC.	RAD.			
EAV	A1-02	GX	A100, R-A102 - CAFE & BOH GX	725	725	530	500	680	14	DDC	0.50	35	35	PRICE	SDV	

		SOUNI	D ATT	ENUA	TOR	S					
DESIG	GNATION	OEDWOE	AIR			OVERALL SIZE			MED	MODEL	NOTES
SATT	NUM	SERVICE	FLOW (CFM)	VELOCITY (FPM)	W (IN)	H (IN)	LENGTH	(IN WG)	MFR	MODEL	NOTES
SATT	SA1-09	A100, R-A102 - CAFE & BOH IU	445	400	14	12	3' - 0"	0.11	IAC	HLFL	
SATT	SA1-10	A100, R-A102 - CAFE & BOH VENT	450	450	12	12	3' - 0"	0.11	IAC	HLFL	

"S" UNITS ARE FORWARD FLOW; "E" UNITS ARE REVERSE FLOW PROVIDE DUCT TRANSITIONS AS REQUIRED FOR CONNECTING TO ATTENUATOR SIZES AVAILABLE FROM MANUFACTURER. ATTENUATOR SIZES CORRESPOND TO DUCT SIZES AS MINIMUM

SIZE	$\overline{}$			/IAKE-UP	GLYCOL & N	CHW. HW.	
SHUT-OFF   STANDARD (NON-FIRE TITE) SEAT, CARBON STEEL BODY, 316 STAINLESS	NOTES						
2-1/2"   8"   STANDARD, (NON-FIRE TITE) SEAT, CARBON STEEL BODY, 318 STAINLESS DEC., 174 PE SHART, FILLED PTP SEAT, PTRE SEAT, WITH GEAR. WITH GEAR ACCEPTABLE WHERE ACCESSIBLE)		MODEL NUMBERS	AND/OR WROUGHT COPPER FITTINGS	FROM THROUGH		ITEM	
BALL AND STEM, THE SEATS AND SEALS, LOCKING EXTENSION		SEE SPEC	STANDARD (NON-FIRE TITE) SEAT, CARBON STEEL BODY, 316 STAINLESS DISC, 17-4 PH SHAFT, FILLED PTFE SEAT, PTFE SEAL, WITH GEAR OPERATOR FOR 6" AND ABOVE; (VICTAULIC CONNECTIONS ARE	8"	2-1/2"	SHUT-OFF	
VALVE, SOLDER ENDS (PROPRESS ACCEPTABLE WHERE ACCESSIBLE)   SEE SPEC		SEE SPEC	BALL AND STEM, TFE SEATS AND SEALS, LOCKING EXTENSION HANDLES, SOLDER ENDS (PROPRESS ACCEPTABLE WHERE	2"	3/4"		
PUMP CHECK   3"   6"   STAINLESS STEEL SPRING LOADED, BRONZE DISC AND SEAT; FLANGED CONNECTIONS (VICTAULIC CONNECTIONS ARE ACCEPTABLE WHERE ACCESSIBLE)		SEE SPEC		2"	3/4"	BALANCING	
DRAIN   3/4"   3/4"   BALL , RPTEE SEATS AND SEALS, LEVER HANDLE, SOLDER ENDS, DUST COVER AND CHAIN; SOLDER ENDS (OR PROPRESS WHERE ACCESSIBLE)		SEE SPEC	STAINLESS STEEL SPRING LOADED, BRONZE DISC AND SEAT; FLANGED CONNECTIONS (VICTAULIC CONNECTIONS ARE ACCEPTABLE WHERE ACCESSIBLE)	6"	3"	PUMP CHECK	
STRAINER   STAINLESS   STEEL SCREEN, FLANGED CONNECTIONS (VICTAULIC CONNECTIONS ARE ACCEPTABLE WHERE ACCESSIBLE)		SEE SPEC	BALL , RPTFE SEATS AND SEALS, LEVER HANDLE, SOLDER ENDS, DUST COVER AND CHAIN; SOLDER ENDS (OR PROPRESS WHERE	3/4"	3/4"	DRAIN	
3"		SEE SPEC	CLASS 150, CAST IRON BODY, 1/8" DIAMETER PERFORATIONS, STAINLESS STEEL SCREEN, FLANGED CONNECTIONS (VICTAULIC CONNECTIONS ARE ACCEPTABLE WHERE ACCESSIBLE)	6"	5"		
2-1/2"   3"   STEEL SCREEN, FLANGED CONNECTIONS (VICTAULIC CONNECTIONS ARE ACCEPTABLE WHERE ACCESSIBLE)		SEE SPEC	STAINLESS STEEL SCREEN, FLANGED CONNECTIONS (VICTAULIC	4"	3"		
SITEM   SIZE   SCHD 40 CARBON STEEL PIPE WITH BUTT WELDING, THREADED OR MANUFACTURER MODEL NUMBERS		SEE SPEC	STEEL SCREEN, FLANGED CONNECTIONS (VICTAULIC CONNECTIONS ARE	3"	2-1/2"	STRAINER	
SIZE FROM THROUGH  SIZE FROM THROUGH  SHUT-OFF  8"  12"  SCHD 40 CARBON STEEL PIPE WITH BUTT WELDING, THREADED OR FLANGED ENDS FOR VALVES  MANUFACTURER MODEL NUMBERS  MODEL NUMBERS  MANUFACTURER MODEL NUMBERS  MANUFACTURER MODEL NUMBERS  MODEL NUMBERS  SEE SPEC  SEE SPEC  SEE SPEC  SEE SPEC  STRAINERS  3/4"  2"  CAST IRON, 250 PSIG DESIGN, 20 MESH PERFORATIONS, STAINLESS STEEL SCREEN, THREADED ENDS  STEEL SCREEN, FLANGED ENDS  SEE SPEC		SEE SPEC	MESH PERFORATIONS, SOLDER ENDS (OR PROPRESS WHERE	2"	3/4"		
SIZE   FLANGED ENDS FOR VALVES   MODEL NUMBERS					S(15)		
SHUT-OFF  8"  12"  GATE VALVE, 200 PSIG, CAST STEEL BODY, BRONZE TRIM, THREADED ENDS UP TO 2 INCH, FLANGED ENDS ABOVE 2 INCH  BUTTERFLY VALVE, CLASS 200, SINGLE FLANGED LUG BODY, STANDARD (NON-FIRE TITE) SEAT, CARBON STEEL BODY, 316 STAINLESS DISC, 17-PH SHAFT, FILLED PTFE SEAT, PTFE SEAL, WITH LEVER OPERATOR  3/4"  2"  CAST IRON, 250 PSIG DESIGN, 20 MESH PERFORATIONS, STAINLESS STEEL SCREEN, THREADED ENDS  STRAINERS  2-1/2"  12"  CAST IRON, 250 PSIG DESIGN, 1/8" DIAMETER PERFORATIONS, STAINLESS STEEL SCREEN, FLANGED ENDS	NOTES		•	SIZE	S	ITEM	
SHUT-OFF  8"  12"  BUTTERFLY VALVE, CLASS 200, SINGLE FLANGED LUG BODY, STANDARD (NON-FIRE TITE) SEAT, CARBON STEEL BODY, 316 STAINLESS DISC, 17-PH SHAFT, FILLED PTFE SEAT, PTFE SEAL, WITH LEVER OPERATOR  3/4"  2"  CAST IRON, 250 PSIG DESIGN, 20 MESH PERFORATIONS, STAINLESS STEEL SCREEN, THREADED ENDS  STRAINERS  2-1/2"  12"  CAST IRON, 250 PSIG DESIGN, 1/8" DIAMETER PERFORATIONS, STAINLESS STAINLESS STAINLESS STEEL SCREEN, FLANGED ENDS  ABBREVIA FIGURE  SEE SPEC  SEE SPEC				THROUGH	FROM		
8" 12" (NON-FIRE TITE) SEAT, CARBON STEEL BODY, 316 STAINLESS DISC, 17-PH SHAFT, FILLED PTFE SEAT, PTFE SEAL, WITH LEVER OPERATOR  3/4" 2" CAST IRON, 250 PSIG DESIGN, 20 MESH PERFORATIONS, STAINLESS STEEL SCREEN, THREADED ENDS  2-1/2" 12" CAST IRON, 250 PSIG DESIGN, 1/8" DIAMETER PERFORATIONS, STAINLESS STEEL SCREEN, FLANGED ENDS  APPRENDATIONS		SEE SPEC		6"	3/4"		
STRAINERS  2" STEEL SCREEN, THREADED ENDS  CAST IRON, 250 PSIG DESIGN, 1/8" DIAMETER PERFORATIONS, STAINLESS STEEL SCREEN, FLANGED ENDS  SEE SPEC  SEE SPEC			(NON-FIRE TITE) SEAT, CARBON STEEL BODY, 316 STAINLESS DISC, 17-	12"	8"	SHUT-OFF	
2-1/2" 12" CAST IRON, 250 PSIG DESIGN, 1/8" DIAMETER PERFORATIONS, STAINLESS STEEL SCREEN, FLANGED ENDS  APPREL VIATIONS		SEE SPEC	3/4" STEEL SCREEN, THREADED ENDS		OTDAINE DO		
ADDDE VIATIONS:		SEE SPEC		12"	2-1/2"	STRAINERS	
NOTES:			ABBREVIATIONS:			NOTES:	
1. STEM EXTENSIONS REQUIRED FOR VALVES ON INSULATED PIPING. CWP COLD WORKING PRESS	JURE	COLD WORKING PRESSURI	ED FOR VALVES ON INSULATED PIPING.	NSIONS REQUIF	STEM EXTEN	1.	
2. PROVIDE LOCKABLE HANDLES ON CHW ISOLATION VALVES FOR WINTER-LAYUP. EPDM							
3. PROVIDE RECOMMENDED STRAIGHT RUNS UP AND DOWNSTREAM OF DEVICE.  4. PROVIDE CHAINWHEELS ON OPERATORS FOR NPS 6-INCH AND LARGER AND  PTFE  PTFE							

	AUTOMATIC FLOW CONTROL VALVES												
	FLOW RATE				APPROX.								
SIZE	Cv	MAX GPM	VALVE TYPE	BODY MATERIAL	WEIGHT (LBS)	MFR	MODEL	NOTES					
1/2"	7.9	1.5	SWEAT OR THREADED	FORGED BRASS	2	FLOW DESIGN INC.	AUTOFLOW AC050L						
3/4"	8.8	3.5	SWEAT OR THREADED	FORGED BRASS	2.1	FLOW DESIGN INC.	AUTOFLOW AC075L						
1"	19.7	7.0	SWEAT OR THREADED	FORGED BRASS	4.5	FLOW DESIGN INC.	AUTOFLOW AC100L						
1-1/4"	20.4	14.0	SWEAT OR THREADED	FORGED BRASS	4.6	FLOW DESIGN INC.	AUTOFLOW AC125L						
1-1/2"	52.7	20.0	SWEAT OR THREADED	FORGED BRASS	9.3	FLOW DESIGN INC.	AUTOFLOW AC150L						
2"	55.1	40.0	SWEAT OR THREADED	FORGED BRASS	9.5	FLOW DESIGN INC.	AUTOFLOW AC200L						
2-1/2"	-	64.0	WAFER	DUCTILE IRON	10	FLOW DESIGN INC.	AUTOFLOW WS2501						
3"	_	115.0	WAFER	DUCTILE IRON	18	FLOW DESIGN INC.	AUTOFLOW WS3001						
4"	_	240.0	WAFER	DUCTILE IRON	24	FLOW DESIGN INC.	AUTOFLOW WS4001						

## NOTES:

1. EQUIPMENT SHALL BE SELECTED SO THAT THE PRESSURE DIFFERENTIAL FALLS IN THE RANGE OF 2-32 PSIG.

5. GASKETS USED FOR VICTAULIC CONNECTIONS SHALL BE SUITABLE FOR 35%

PROPYLENE GLYCOL (WHERE APPLICABLE)

6. VICTAULIC CONNECTIONS SHALL BE GROOVED

- 2. ALL DEVICES SHALL HAVE PT AND DRAIN PORTS.
- 3. CONNECTION TYPE SHALL MATCH HYDRONIC PIPING SPECIFICATIONS.

CIRCUIT SETTERS											
		FLOW RATE									
SIZE	MIN. GPM (1 FT WG)	NOM. GPM (2 FT WG)	MAX. GPM (20 FT WG)	MFR	MODEL	NOTES					
1/2"	0.1	1.7	5.0	ITT BELL & GOSSETT	CB-1/2S	003					
3/4"	0.4	3	10	ITT BELL & GOSSETT	CB-3/4S	003					
1"	0.3	5	18	ITT BELL & GOSSETT	CB-1S	003					
1-1/4"	1.2	12	37	ITT BELL & GOSSETT	CB-1-1/4S	003					
1-1/2"	2.4	19	58	ITT BELL & GOSSETT	CB-1-1/2S	003					
2"	2.1	37	120	ITT BELL & GOSSETT	CB-2S	023					
2-1/2"	4.6	59	187	ITT BELL & GOSSETT	CB-2-1/2F	003					
3"	16.0	110	340	ITT BELL & GOSSETT	CB-3F	023					
4"	28.0	320	480	ITT BELL & GOSSETT	CB-4F	003					

TFE

WOG

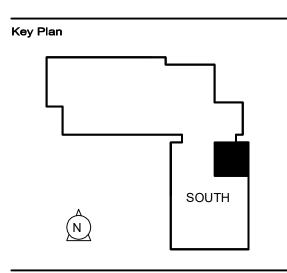
- 1. SELECT SMALLEST SIZE WITH A NOMINAL FLOW RATE THAT MEETS OR EXCEEDS THE REQUIRED GPM.
- 2. ALL CIRCUIT SETTERS SHALL HAVE MEMORY STOP, EXTENDED SELF-SEALING PT PORTS AND A DRAIN PORT.
- 3. CONNECTION TYPE SHALL MATCH HYDRONIC PIPING SPECIFICATIONS.

ΓES	
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	by: <b>GP</b>	Reviewed by: BB

Project No: 16.07011.12

**ISSUED FOR CONSTRUCTION - 01.17.20** 

**HVAC SCHEDULES** 

Sheet Title