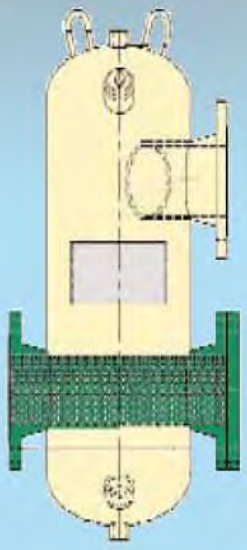
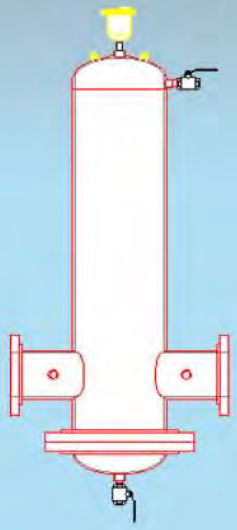
SECTION 8.3.1

FLO FAB

AIR SEPARATOR

Series SEP-T-F-(G)





Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories
for HVAC Market After-Sales Parts and Services

Air separator - SEP-T-F-(G)

www.flofab.com

FLO FAB INC
LAKE WORTH,
FLORIDA, USA

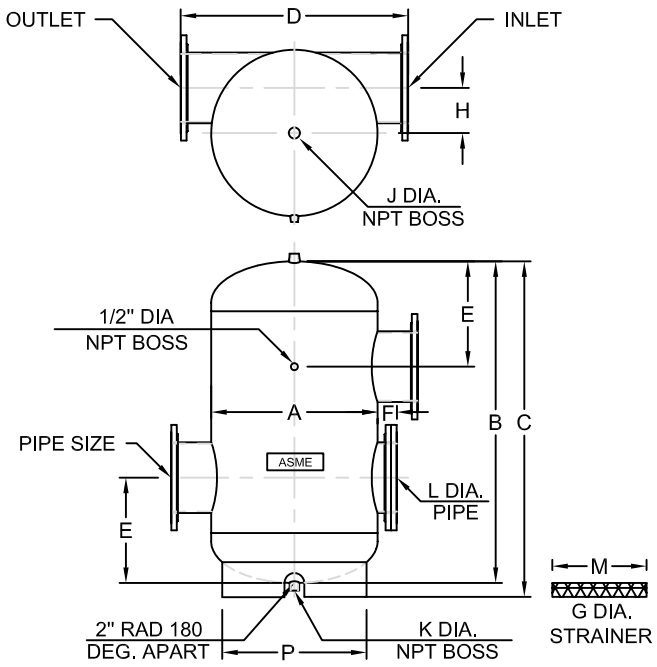
FLO FAB

SUBMITTAL SHEET
ISSUE DATE: 2008/11/05
REVISION DATE: 2008/11/05
SECTION: 8

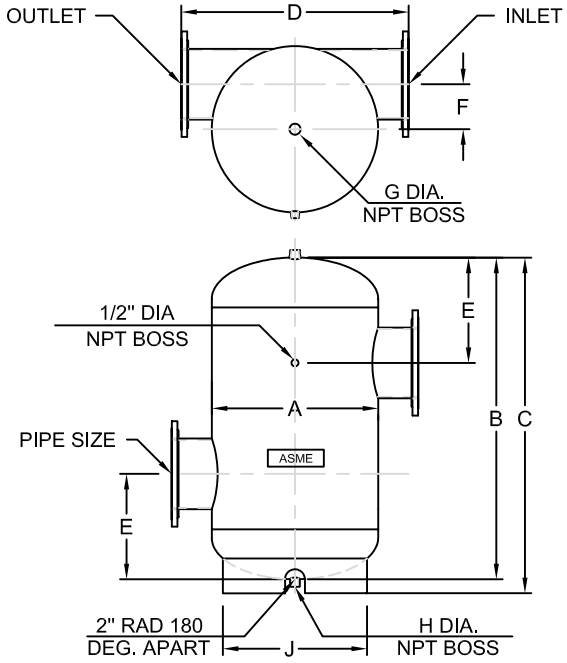
SEP-T

ASME TANGENTIAL AIR SEPARATORS

* ASME CONSTRUCTED AND STAMPED
* 125 PSIG / 862 KPa DESIGN PRESSURE
* 375 F / 190 C MAXIMUM OPERATING TEMPERATURE
* CARBON STEEL CONSTRUCTION-PAINTED
* TANGENTIAL DESIGN RESULTS IN SMALLER UNIT
* PROVIDES AIR FREE FLUID FLOW WHICH PROTECTS AGAINST DAMAGE AND SYSTEM NOISE
* HELPS PREVENT WATER LOGGED COMPRESSION TANKS
* STAINLESS STEEL STRAINER
* 2" AND 2 1/2" PIPE SIZES ARE NPT
* 3" AND LARGER PIPE SIZES ARE FLANGED
* 2" AND 2 1/2" STRAINER INLET IS PIPE CAP
* EXTERNAL PRIMER FINISH
* 100% TESTED



SEPARATOR WITH STRAINER (F4 or F6)



SEPARATOR WITHOUT STRAINER

DIMENSIONAL DATA

	FLO FAB MODEL NUMBER	PIPE SIZE		WITH STRAINERS (F4 or F6) - DIMENSIONS IN INCHES													
		IN	MM	A	B	C	D	E	F	G	H	J	K	L	M	P	WEIGHT (LBS)
☐	SEP-T-2	2	50	12	19 1/2	22 1/2	16 5/8	5 1/2	2 1/8	2	4 5/16	1 1/4	1	2	16 1/2	9 1/2	49
☐	SEP-T-2 1/2	2 1/2	65	12	19 1/2	22 1/2	16 5/8	5 1/2	2 3/8	2 1/2	4 5/16	1 1/4	1	2 1/2	16 1/2	9 1/2	64
☐	SEP-T-3-F	3	80	12	19 1/2	22 1/2	19 3/4	5 3/4	2 1/2	3	3 3/4	1 1/4	1	3	17 1/8	9 1/2	69
☐	SEP-T-4-F	4	100	14	29	32	21 3/4	9 1/8	2 1/2	4	4 1/4	1 1/2	2	4	19 1/2	11 1/2	111
☐	SEP-T-5-F	5	125	14	29	32	21 3/4	9 1/8	2 1/2	5	3 3/4	1 1/2	2	5	19 3/4	11 1/2	138
☐	SEP-T-6-F	6	150	20	41	44	28	13 1/4	2 1/2	6	6 1/4	2	2	6	25	18	236
☐	SEP-T-8-F	6	150	20	41	44	28	13 1/4	3	8	5 3/16	2	2	8	29	18	359

	FLO FAB MODEL NUMBER	PIPE SIZE		WITHOUT STRAINERS - DIMENSIONS IN INCHES									
		IN	MM	A	B	C	D	E	F	G	H	J	APPROX. SHIPPING WEIGHT (LBS)
☐	SEP-T-2	2	50	12	19 1/2	22 1/2	16 5/8	5 1/2	4 5/16	1 1/4	1	9 1/2	41
☐	SEP-T-2 1/2	2 1/2	65	12	19 1/2	22 1/2	16 5/8	5 1/2	4 5/16	1 1/4	1	9 1/2	56
☐	SEP-T-3-F	3	80	12	19 1/2	22 1/2	19 3/4	5 3/4	3 3/4	1 1/4	1	9 1/2	59
☐	SEP-T-4-F	4	100	14	29	32	21 3/4	9 1/8	4 1/4	1 1/2	2	11 1/2	97
☐	SEP-T-5-F	5	125	14	29	32	21 3/4	9 1/8	3 3/4	1 1/2	2	11 1/2	118
☐	SEP-T-6-F	6	150	20	41	44	28	13 1/4	6 1/4	2	2	18	201
☐	SEP-T-8-F	8	200	20	41	44	28	13 1/4	5 3/16	2	2	18	299

ALL DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

OPTIONS

- ☐ EXTERNAL EPOXY FINISH (SUFFIX C)
- ☐ 304 STAINLESS STEEL STRAINER (SUFIX F4)
- ☐ 316 STAINLESS STEEL STRAINER (SUFFIX F6)
- ☐ ANGLE LEGS (SUFFIX L)
- ☐ OTHER DESIGNED PRESSURES _____ PSI (_____KPa) (SUFFIX SPE)

FLO FAB

SUBMITTAL SHEET
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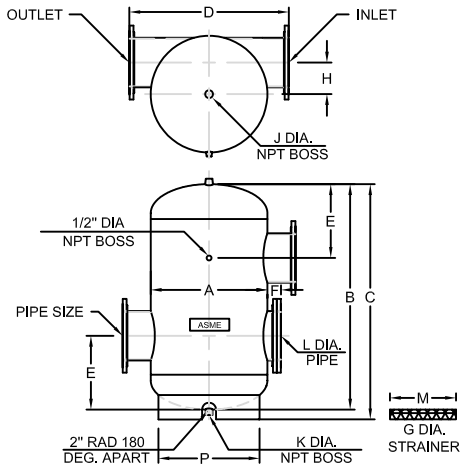
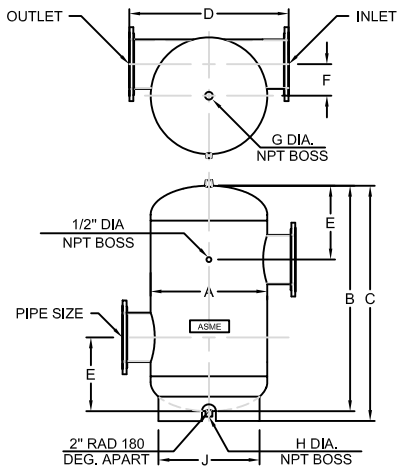
SEP-T

ASME TANGENTIAL
AIR SEPARATORS

* ASME CONSTRUCTED AND STAMPED
* 150 PSIG / 1034 KPa DESIGN PRESSURE
* 375 F / 190 C MAXIMUM OPERATING TEMPERATURE
* CARBON STEEL CONSTRUCTION-PAINTED
* TANGENTIAL DESIGN RESULTS IN SMALLER UNIT
* PROVIDES AIR FREE FLUID FLOW WHICH PROTECTS AGAINST DAMAGE AND SYSTEM NOISE
* HELPS PREVENT WATER LOGGED COMPRESSION TANKS
* STAINLESS STEEL STRAINER
* ALL PIPE SIZES ARE FLANGED
* EXTERNAL PRIMER FINISH
* 100% TESTED



SEPARATOR WITH STRAINER (F4 or F6)



SEPARATOR WITHOUT STRAINER

DIMENSIONAL DATA

	FLO FAB MODEL NUMBER	PIPE SIZE		WITH STRAINERS (F4 or F6) - DIMENSIONS IN INCHES														
		IN	MM	A	B	C	D	E	F	G	H	J	K	L	M	P	WEIGHT (LBS)
☐	SEP-T-10-F	10	250	30	58	60 1/2	41	19	3 1/2	10	9 1/8	2	2	10	25 1/2	24	663
☐	SEP-T-12-F	12	300	30	58	60 1/2	41	19	3 1/2	12	8 1/8	2	2	12	26 1/2	24	747
☐	SEP-T-14-F	14	350	36	75 1/2	78	46 3/8	22	3 1/2	14	10 3/16	2	2	14	42 1/4	30	1493
☐	SEP-T-16-F																
☐	SEP-T-18-F																
☐	SEP-T-20-F																
☐	SEP-T-22-F																
☐	SEP-T-24-F																
☐	SEP-T-26-F																
☐	SEP-T-28-F																
☐	SEP-T-30-F																

	FLO FAB MODEL NUMBER	PIPE SIZE		WITHOUT STRAINERS - DIMENSIONS IN INCHES									
		IN	MM	A	B	C	D	E	F	G	H	J	APPROX. SHIPPING WEIGHT (LBS)
☐	SEP-T-10-F	10	250	30	58	60 1/2	41	19	9 1/8	2	2	24	563
☐	SEP-T-12-F	12	300	30	58	60 1/2	41	19	8 1/8	2	2	24	647
☐	SEP-T-14-F	14	350	36	75 1/2	78	46 3/8	22	10 3/16	2	2	30	1366
☐	SEP-T-16-F												
☐	SEP-T-18-F												
☐	SEP-T-20-F												
☐	SEP-T-22-F												
☐	SEP-T-24-F												
☐	SEP-T-26-F												
☐	SEP-T-28-F												
☐	SEP-T-30-F												

ALL DIMENSIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

OPTIONS

☐ EXTERNAL EPOXY FINISH (SUFFIX C)

☐ 304 STAINLESS STEEL STRAINER (SUFIX F4)

☐ 316 STAINLESS STEEL STRAINER (SUFFIX F6)

☐ ANGLE LEGS (SUFFIX L)

☐ OTHER DESIGNED PRESSURES
_____ PSI (_____KPa) (SUFFIX SPE)

FLO FAB
AQUA PROFAB

SUBMITTAL SHEET
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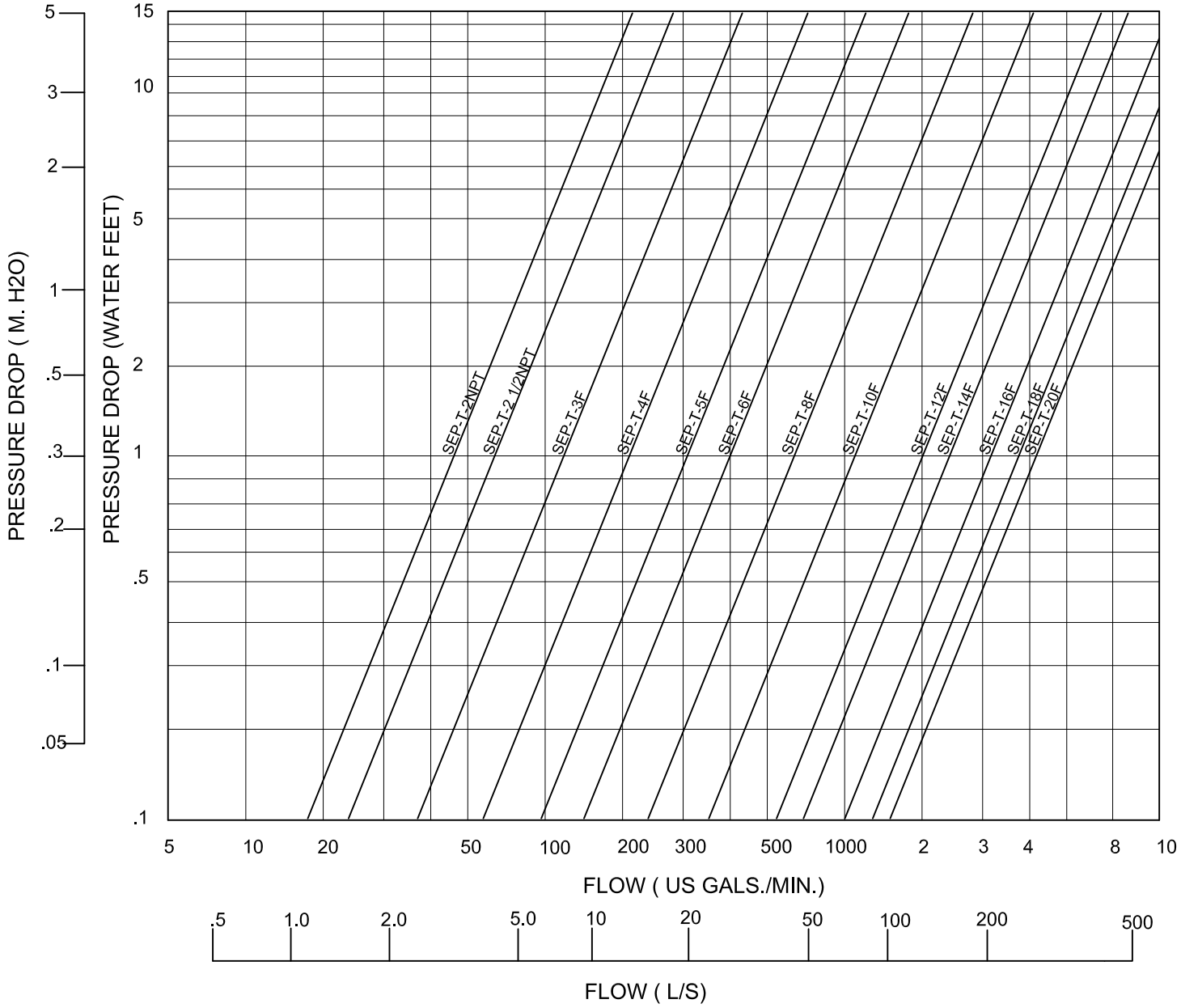
SEP-T

PERFORMANCE CURVE

TANGENTIAL AIR SEPARATOR



EX : SEP - T - 3F - F4 or F6

- TYPE
- TANGENTIAL
- DIMENSION
- FLANGED
- STRAINER

FLO FAB
AQUA PROFAB

SUBMITTAL SHEET
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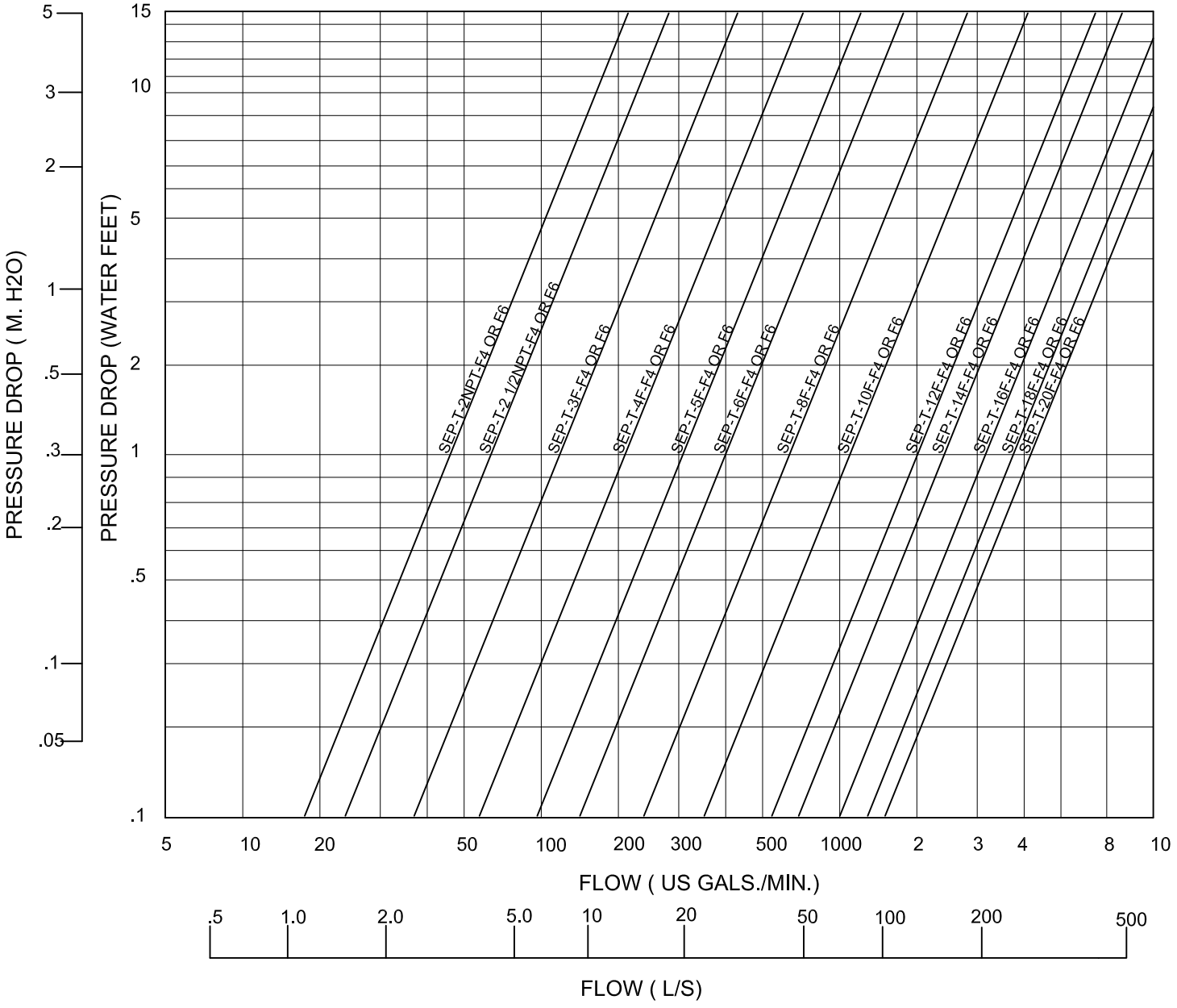
SEP-T-T4/T6

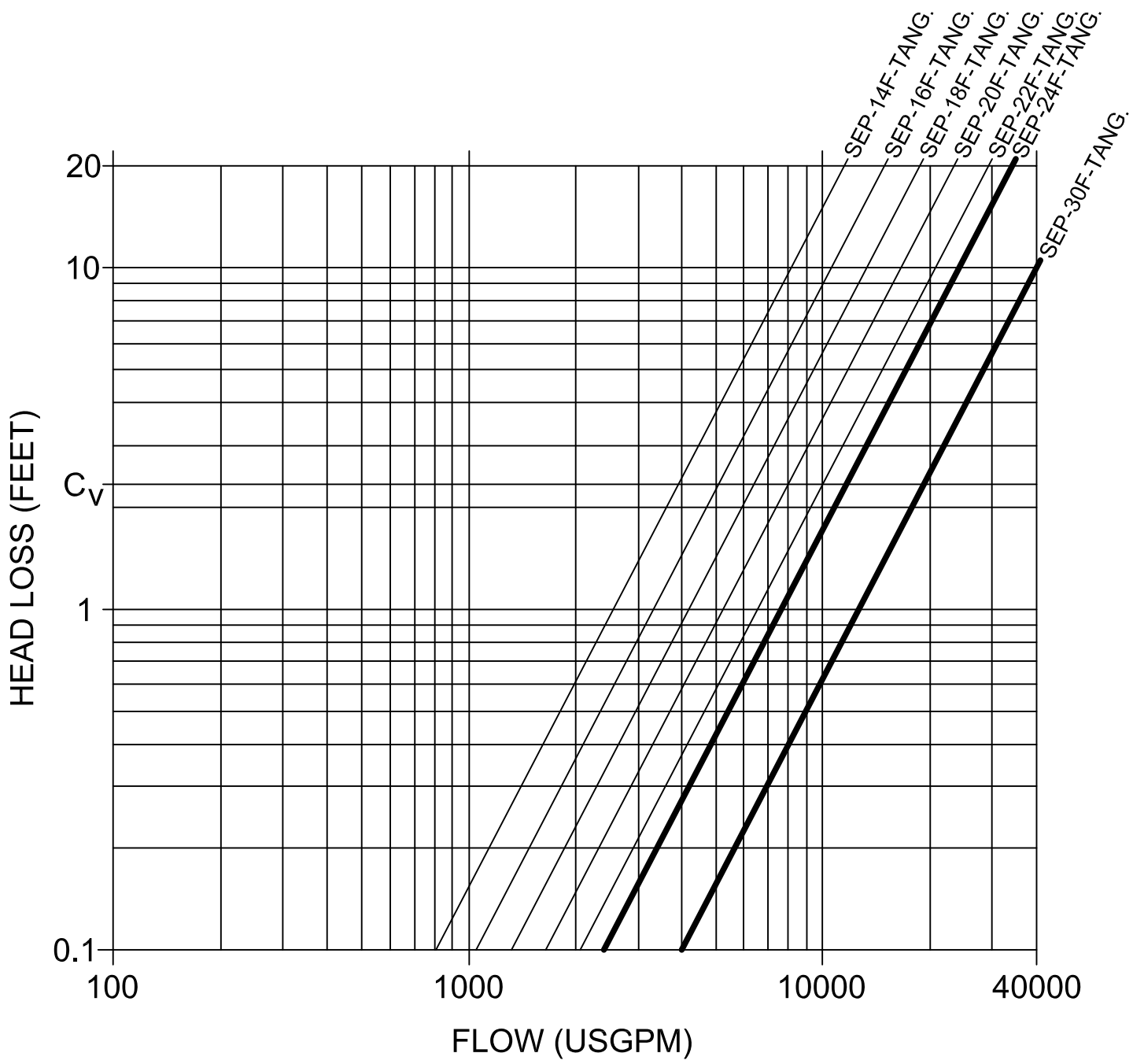
PERFORMANCE CURVE

TANGENTIAL AIR SEPARATOR WITH STRAINER



EX : SEP - T - 3F - F4 or F6

- TYPE
- TANGENTIAL
- DIMENSION
- FLANGED
- STRAINER



DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.
DO NOT USE FOR CONSTRUCTION PURPOSES

FLO FAB
AQUA PROFAB

LAKE WORTH
FLORIDA,U.S.A
WWW.FLOFAB.COM

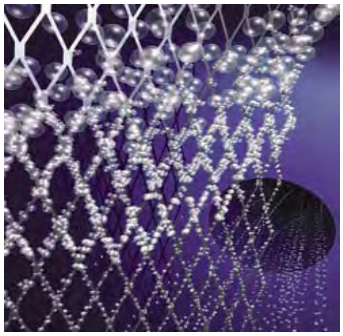
TITLE: TANGENTIAL AIR SEPARATOR CURVE FROM 14"Ø TO 30"Ø				
PROJECT: RAGING WIRE PHASE IV			TAG: AS-401, AS-402	
CUSTOMER: HEAT TRANSFER			DATE: 09/10/2012	
DRAWING BY: P.M.	DRAWING N°: SEP-14F to 30F-	LAYOUT:	SCALE: N/A	REV.: 2

AIR & DIRT SEPARATOR

Air and dirt separators increase thermal conductivity and extend the life of piping and equipment in chilled water systems, heating hot water systems, and commercial central plants.

Air is introduced when the system is filled. As the water circulates, the air will collect in piping high points, coils, and the pump, forming bubbles that can restrict—or even stop— the water flow, reducing thermal transfer efficiency. It also promotes interior corrosion that adds to other sources of dirt (i.e., pipe thread shavings, weld slag) that shortens the life of piping and pumps.

Vortex air separators have been used for years to eliminate the dissolved air from closed-loop systems. They work by reducing the velocity of the water and creating a vortex, which allows air to be released. Some dirt also will fall to the bottom. However, studies have shown they are only about 40% effective.Air and dirt separators utilize a similar design, but add a coalescent medium inside the tank. A coalescent medium is a series of wires with supports, wrapped around a center tube causing the small bubbles of air to combine into larger air bubbles and then rise to the top of the vessel. This provides for added area to allow for greater dirt trapping and elimination of up to 99.5% of the dissolved air. With continuous cycling, dirt removal will approach 99%.



Microbubble air separation

The Flo Fab Air and Dirt internal element (1) creates the whirling movement required to facilitate the release of microbubbles and their adhesion to the internal element surfaces.
The bubbles, fusing with each other, increase in size until the hydrostatic thrust overcomes the adhesion forceto the mesh.
They rise toward the top of the unit from which they are released through a float-operated automatic air vent.

Microparticle dirt separation

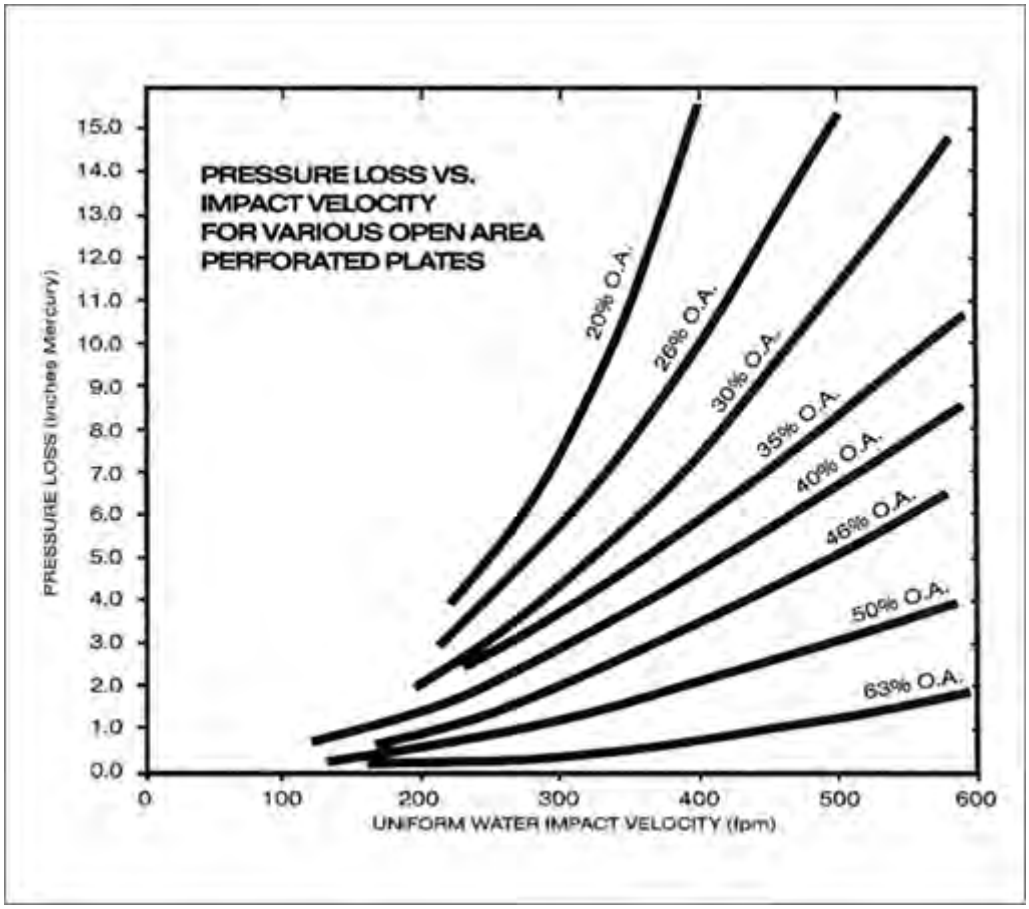
Impurities in the fl uid upon striking the surfaces of the Flo Fab Air and Dirt internal element (1), get separated and drop to the bottom of the body where they collect.
In addition, the large internal volume of Flo Fab Air and Dirt slows down the flow speed of the fluid thus helping, by gravity, to separate the particles it contains.The collected impurities are discharged by opening the drain valve (2) with the handle, even with the system operating.

Fluid Pressure Loss Through Perforated Plate

In many applications of perforated plate, the estimated energy loss or pressure loss through perforated plates is one of the design considerations. The following pressure loss information was developed from a laboratory liquid flow system. The laboratory system maintained a non-swirling flow impacting perpendicularly on the sample. Various perforated thin gage plates were inserted into a uniform velocity liquid flow stream.

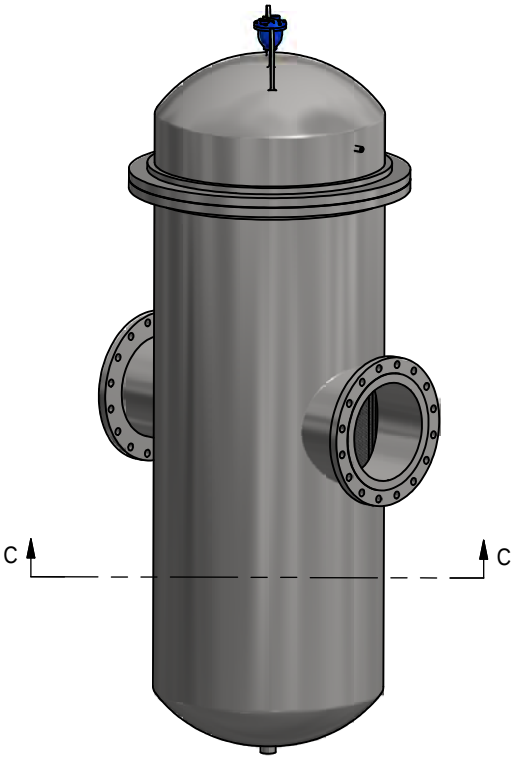
Pressure loss for ambient liquid flow was then measured at a series of velocities and reported as inches of mercury loss for each flow.
This data therefore presents the best flow condition value loss. Pressure loss can be estimated beyond the range of the data on the basis of the ratio of the anticipated velocity to the highest tabulated velocity. This ratio squared multiplied by the tabulated pressure loss can be used to approximate the higher velocity loss.

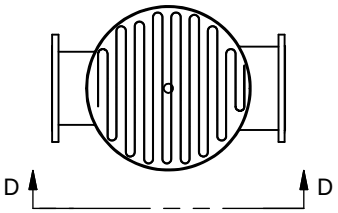
Pressure loss can be estimated from the tables for a different liquid density by using the ratio of the anticipated liquid density to the tabulated density as a multiplier of the noted loss.
In applying this data, consideration must be given to the actual anticipated characteristics of the flow impacting on the perforated plate. Distorted flow patterns with high velocity zones will increase the loss of the plate, as will directional flow not perpendicular to the plate surface.



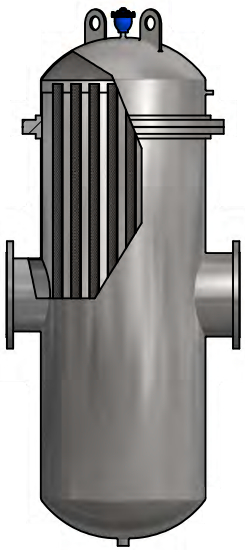
NOTE:

AS PER ASME CODE SEC VIII 2007-A08
DIV.1 PARAG. UW-12(C)
OPERATING PRESSURE 150 PSI (1034 kPa)
HYDROSTATIC TEST AT 195 PSI (1345 kPa)
DESIGN TEMPERATURE 550 F (288 C)
MATERIAL SA-516 GR.70
CARBON STEEL OPENING 3000#
APPROX. WEIGHT 2016 POUNDS (916 KG)
EXTERNAL PRIMER FINISH
100% TESTED

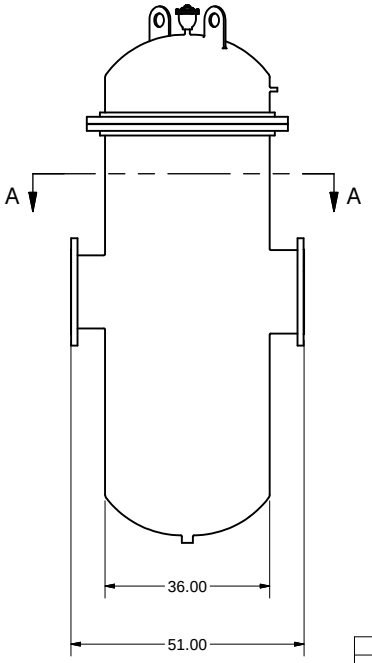


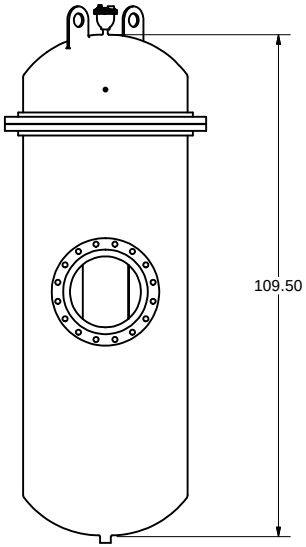


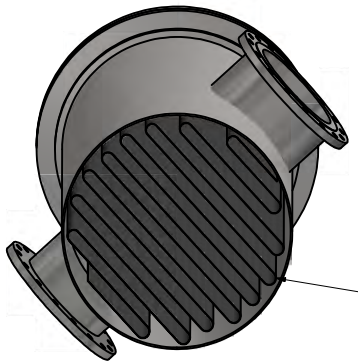
SECTION A-A
SCALE 1/21



VIEW D-D
SCALE 1/21







SECTION C-C
SCALE 1/15

PERFORATED PLATE
Ø 0.078 x .125" STAGGERED
Max. solid passage size 0.077"

REVISION HISTORY			
REV	DESCRIPTION	DATE	APPROVED
1			
3			
2			

*** DRAWING NOT TO SCALE, FOR REFERENCE ONLY***
DIMENSIONS SUBJECT TO CHANGE WITHOUT NOTICE.
DO NOT USE FOR CONSTRUCTION PURPOSES

DESIGNER: F. Gariepy | 18/09/2013

TITLE / TITRE: Air and dirt seperator 16"

PROJECT / PROJET:

CUSTOMER / CLIENT:

FLO FAB

LAKE WORTH
FLORIDA U.S.A
WWW.FLOFAB.COM

QUOTE:

DWG NO: ADSF-16F

REV:

SCALE / ECHELLE:

TAG:

SHEET 1 OF 1

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ISSUE DATE: 2008/04/21
REVISION DATE: 2008/11/24
SECTION: 8

FLO FAB

AIR & DIRT SEPARATOR

WITH FIXED MEDIUM

MODELS: ADSF-2 TO ADSF-12

UNIT TAG NO.:_____ **ORDER NO.**_____

ENGINEER:_____ **SUBMITTED BY**_____**DATE**_____

FLO FAB REPRESENTATIVE:_____ **APPROVED BY**_____**DATE**_____

_____

DESCRIPTION

FLO FAB ADSF SERIES AIR & DIRT SEPARATORS ARE DESIGNED TO ELIMINATE ENTRAINED AIR AND SEPARATE DEBRIS ASSOCIATED WITH START-UP AND MAINTENANCE OF ANY HYDRONIC SYSTEM. THE DESIGN INCORPORATES A SKIM VALVE, USED TO ELIMINATE FLOATING DEBRIS, AN AIR VENT TO AUTOMATICALLY RELEASE AIR FROM THE SEPARATOR. THE DESIGN AND CONSTRUCTION CONFORMS TO ASME SECTION VIII, DIV.1

CONSTRUCTION

SHELL: CARBON STEEL
COALESCING MEDIUM: STAINLESS STEEL
BLOW DOWN VALVE (OPTIONAL): BRONZE
SKIM VALVE (OPTIONAL): BRONZE
VENT (OPTIONAL): STAINLESS STEEL

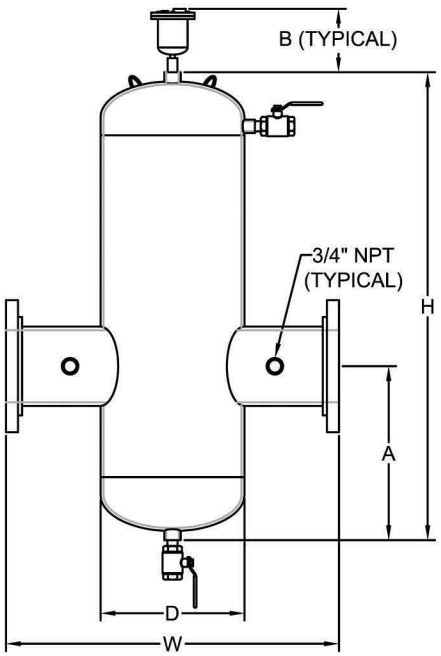
PERFORMANCE LIMITATIONS

MAXIMUM DESIGN TEMPERATURE: 250°F
MAXIMUM DESIGN PRESSURE: 150 PSIG

DIMENSIONS AND WEIGHTS

MODEL	CONN. SIZE	FLOW GPM	D (IN.)	H (IN.)	W (IN.)	A (IN.)	B (IN.)	WT LBS.
ADSF-2-F	2 FLG.	46	4-1/2	23	15-1/4	11-1/2	8-5/8	100
ASDF-2-FNPT	2 NPT.	46	4-1/2	23	10-3/8	11-1/2	8-5/8	90
ADSF-2.5-F	2-1/2 FLG.	72	5-9/16	23	15-3/4	11-1/2	8-5/8	125
ADSF-2.5-FNPT	2-1/2 NPT.	72	5-9/16	23	11	11-1/2	8-5/8	115
ADSF-3-F	3 FLG.	96	6-5/8	29	20-1/4	14-1/2	8-5/8	150
ADSF-3-FNPT	3 NPT.	96	6-5/8	29	12-1/2	14-1/2	8-5/8	130
ADSF-4-F	4 FLG.	170	8-5/8	29	20-5/8	14-1/2	8-5/8	250
ADSF-5-F	5 FLG.	265	10-3/4	39	27-3/4	19-1/2	8-5/8	310
ADSF-6-F	6 FLG.	380	12-3/4	39	27-3/4	19-1/2	8-5/8	375
ADSF-8-F	8 FLG.	630	16	49	33-5/8	24-1/2	8-5/8	700
ADSF-10-F	10 FLG.	960	20	65	37-1/2	32-1/2	8-5/8	1000
ADSF-12-F	12 FLG.	1400	24	76	42-1/2	38	8-5/8	1500

NOTE: LARGER SIZES ARE AVAILABLE UP TO 36 INCHES.



SPECIFICATION

FURNISH AND INSTALL ON THE PLANS AND DESCRIBED HEREIN, A FLO FAB-VENT ADSF AIR & DIRT SEPARATOR AS MANUFACTURED BY FLO FAB COMPANY. EACH SEPARATOR MUST BE DESIGNED WITH A BLOWDOWN VALVE, SKIM VALVE, AND AUTOMATIC AIR VENT. THE SEPARATOR MUST ALSO UTILIZE IN ITS DESIGN A STAINLESS STEEL COALESCING MEDIUM TO AID IN THE SEPARATION OF AIR AND DIRT IN THE SYSTEM ENTRAINED WATER. THE SEPARATOR MUST BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE ASME BOILER AND PRESSURE VESSEL CODE AND STAMPED 150 PSI WORKING PRESSURE.

EACH SEPARATOR SHALL BE FLO FAB MODEL ADSF-_____OR APPROVED EQUAL.

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REVISION DATE: 2008/11/24
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FLO FAB

"HIGH VELOCITY" AIR & DIRT SEPARATOR

WITH FIXED MEDIUM

MODELS: ADSF-HV-2 TO ADSF-HV-12

UNIT TAG NO.:_____ **ORDER NO.**_____

ENGINEER:_____ **SUBMITTED BY**_____**DATE**_____

FLO FAB REPRESENTATIVE:_____ **APPROVED BY**_____**DATE**_____

_____

DESCRIPTION

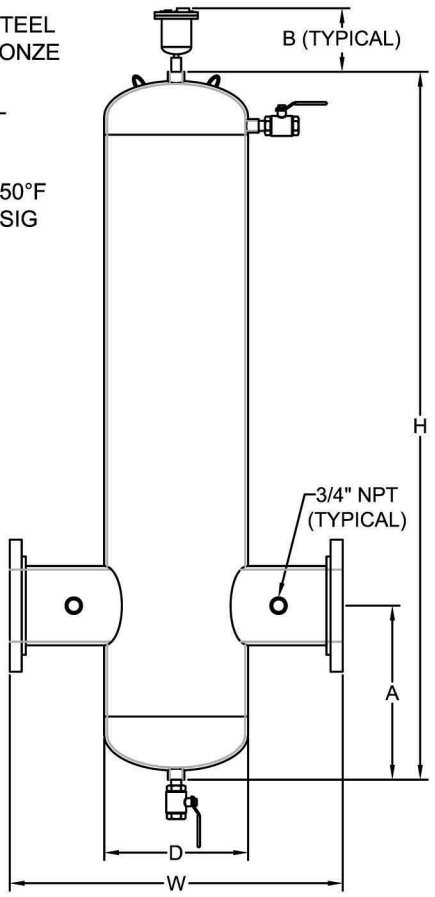
FLO FAB ADSF-HV (HIGH VELOCITY) SERIES AIR & DIRT SEPARATORS ARE DESIGNED TO ELIMINATE ENTRAINED AIR AND SEPARATE DEBRIS ASSOCIATED WITH START-UP AND MAINTENANCE OF ANY HYDRONIC SYSTEM. THE DESIGN INCORPORATES A SKIM VALVE, USED TO ELIMINATE FLOATING DEBRIS, AND AN AIR VENT TO AUTOMATICALLY RELEASE AIR FROM THE SEPARATOR. THE DESIGN AND CONSTRUCTION CONFORMS TO ASME SECTION VIII, DIV.1

CONSTRUCTION

SHELL: CARBON STEEL
COALESCING MEDIUM: STAINLESS STEEL
BLOW DOWN VALVE (OPTIONAL): BRONZE
SKIM VALVE (OPTIONAL): BRONZE
VENT (OPTIONAL): STAINLESS STEEL

PERFORMANCE LIMITATIONS

MAXIMUM DESIGN TEMPERATURE: 250°F
MAXIMUM DESIGN PRESSURE: 150 PSIG



DIMENSIONS AND WEIGHTS

MODEL	CONN. SIZE	FLOW GPM	D (IN.)	H (IN.)	W (IN.)	A (IN.)	B (IN.)	WT LBS.
ADSF-HV-2-F	2 FLG.	105	4-1/2	33	15-1/4	11-1/2	8-5/8	110
ADSF-HV-2-FNPT	2 NPT.	105	4-1/2	33	10-3/8	11-1/2	8-5/8	100
ADSF-HV-2.5-F	2-1/2 FLG.	155	5-9/16	33	15-3/4	11-1/2	8-5/8	140
ADSF-HV-2.5-FNPT	2-1/2 NPT.	155	5-9/16	33	11	11-1/2	8-5/8	125
ADSF-HV-3-F	3 FLG.	225	6-5/8	42	20-1/4	14-1/2	8-5/8	175
ADSF-HV-3-FNPT	3 NPT.	225	6-5/8	42	12-1/2	14-1/2	8-5/8	155
ADSF-HV-4-F	4 FLG.	405	8-5/8	42	20-5/8	14-1/2	8-5/8	275
ADSF-HV-5-F	5 FLG.	630	10-3/4	59	27-3/4	19-1/2	8-5/8	475
ADSF-HV-6-F	6 FLG.	910	12-3/4	59	27-3/4	19-1/2	8-5/8	525
ADSF-HV-8-F	8 FLG.	1610	16	75	33-5/8	24-1/2	8-5/8	825
ADSF-HV-10-F	10 FLG.	2450	20	92	37-1/2	32-1/2	8-5/8	1275
ADSF-HV-12-F	12 FLG.	3500	24	110	42-1/2	38	8-5/8	2050

NOTE: LARGER SIZES ARE AVAILABLE UP TO 36 INCHES.

SPECIFICATION

FURNISH AND INSTALL ON THE PLANS AND DESCRIBED HEREIN, A FLO FAB-VENT ADSF-HV (HIGH VELOCITY) AIR & DIRT SEPARATOR AS MANUFACTURED BY FLO FAB COMPANY. EACH SEPARATOR MUST BE DESIGNED WITH A BLOWDOWN VALVE, SKIM VALVE, AND AUTOMATIC AIR VENT. THE SEPARATOR MUST ALSO UTILIZE IN ITS DESIGN A STAINLESS STEEL COALESCING MEDIUM TO AID IN THE SEPARATION OF AIR AND DIRT IN THE SYSTEM ENTRAINED WATER. THE SEPARATOR MUST BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE ASME BOILER AND PRESSURE VESSEL CODE AND STAMPED 150 PSI WORKING PRESSURE.

EACH SEPARATOR SHALL BE FLO FAB MODEL ADSF-HV-_____OR APPROVED EQUAL.

FLO FAB

AIR & DIRT SEPARATOR
WITH REMOVABLE MEDIUM
MODELS: ADSR-2 TO ADSR-12

UNIT TAG NO.:_____ **ORDER NO.**_____

ENGINEER:_____ **SUBMITTED BY**_____**DATE**_____

FLO FAB REPRESENTATIVE:_____ **APPROVED BY**_____**DATE**_____

_____

DESCRIPTION
FLO FAB ADSR SERIES AIR & DIRT SEPARATORS ARE DESIGNED TO ELIMINATE ENTRAINED AIR AND SEPARATE DEBRIS ASSOCIATED WITH START-UP AND MAINTENANCE OF ANY HYDRONIC SYSTEM. THE DESIGN INCORPORATES A SKIM VALVE, USED TO ELIMINATE FLOATING DEBRIS, A REMOVABLE END COVER FOR COALESCING MEDIUM ACCESS, AND AN AIR VENT TO AUTOMATICALLY RELEASE AIR FROM THE SEPARATOR. THE DESIGN AND CONSTRUCTION CONFORMS TO ASME SECTION VIII, DIV.1

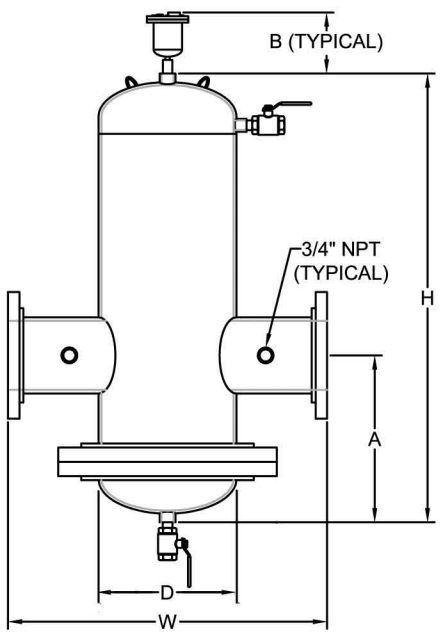
CONSTRUCTION
SHELL: CARBON STEEL
COALESCING MEDIUM: STAINLESS STEEL
BLOW DOWN VALVE (OPTIONAL): BRONZE
SKIM VALVE (OPTIONAL): BRONZE
VENT (OPTIONAL): STAINLESS STEEL

PERFORMANCE LIMITATIONS
MAXIMUM DESIGN TEMPERATURE: 250°F
MAXIMUM DESIGN PRESSURE: 150 PSIG

DIMENSIONS AND WEIGHTS

	MODEL	CONN. SIZE	FLOW GPM	D (IN.)	H (IN.)	W (IN.)	A (IN.)	B (IN.)	WT LBS.
	ADSR-2-F	2 FLG.	46	4-1/2	23	15-1/4	11-1/2	8-5/8	100
	ADSR-2-FNPT	2 NPT.	46	4-1/2	23	10-3/8	11-1/2	8-5/8	90
	ADSR-2.5-F	2-1/2 FLG.	72	5-9/16	23	15-3/4	11-1/2	8-5/8	125
	ADSR-2.5-FNPT	2-1/2 NPT.	72	5-9/16	23	11	11-1/2	8-5/8	115
	ADSR-3-F	3 FLG.	96	6-5/8	29	20-1/4	14-1/2	8-5/8	150
	ADSR-3-FNPT	3 NPT.	96	6-5/8	29	12-1/2	14-1/2	8-5/8	130
	ADSR-4-F	4 FLG.	170	8-5/8	29	20-5/8	14-1/2	8-5/8	250
	ADSR-5-F	5 FLG.	265	10-3/4	39	27-3/4	19-1/2	8-5/8	310
	ADSR-6-F	6 FLG.	380	12-3/4	39	27-3/4	19-1/2	8-5/8	375
	ADSR-8-F	8 FLG.	630	16	49	33-5/8	24-1/2	8-5/8	700
	ADSR-10-F	10 FLG.	960	20	65	37-1/2	32-1/2	8-5/8	1000
	ADSR-12-F	12 FLG.	1400	24	76	42-1/2	38	8-5/8	1500

NOTE: LARGER SIZES ARE AVAILABLE UP TO 36 INCHES.



SPECIFICATION
FURNISH AND INSTALL ON THE PLANS AND DESCRIBED HEREIN, A FLO FAB-VENT ADSR AIR & DIRT SEPARATOR AS MANUFACTURED BY FLO FAB COMPANY. EACH SEPARATOR MUST BE DESIGNED WITH A BLOWDOWN VALVE, SKIM VALVE, AND AUTOMATIC AIR VENT. THE SEPARATOR MUST ALSO UTILIZE IN ITS DESIGN A STAINLESS STEEL COALESCING MEDIUM TO AID IN THE SEPARATION OF AIR AND DIRT IN THE SYSTEM ENTRAINED WATER. THE SEPARATOR MUST BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE ASME BOILER AND PRESSURE VESSEL CODE AND STAMPED 150 PSI WORKING PRESSURE.

EACH SEPARATOR SHALL BE FLO FAB MODEL ADSR-_____OR APPROVED EQUAL.

SUBMITTAL SHEET
ISSUE DATE: 2008/04/21
REVISION DATE: 2008/11/24
SECTION: 8

FLO FAB

"HIGH VELOCITY" AIR & DIRT SEPARATOR

WITH REMOVABLE MEDIUM

MODELS: ADSR-HV-2 TO ADSR-HV-12

UNIT TAG NO.:_____ **ORDER NO.**_____

ENGINEER:_____ **SUBMITTED BY**_____**DATE**_____

FLO FAB REPRESENTATIVE:_____ **APPROVED BY**_____**DATE**_____

_____

DESCRIPTION

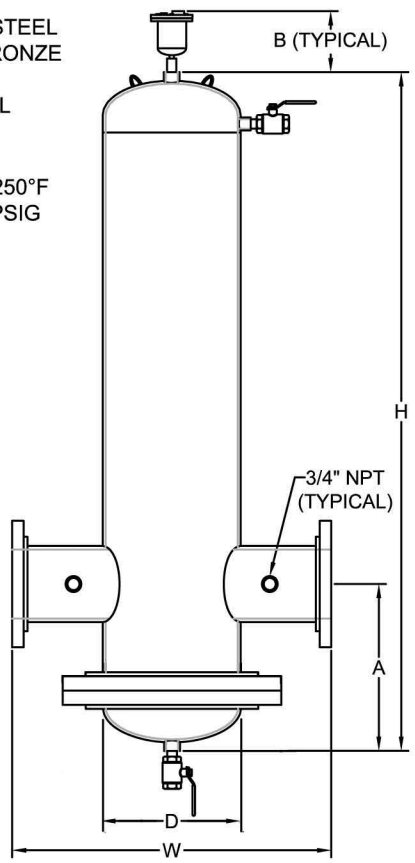
FLO FAB ADSR-HV (HIGH VELOCITY) SERIES AIR & DIRT SEPARATORS ARE DESIGNED TO ELIMINATE ENTRAINED AIR AND SEPARATE DEBRIS ASSOCIATED WITH START-UP AND MAINTENANCE OF ANY HYDRONIC SYSTEM. THE DESIGN INCORPORATES A SKIM VALVE, USED TO ELIMINATE FLOATING DEBRIS, A REMOVABLE END COVER FOR COALESCING MEDIUM ACCESS, AND AN AIR VENT TO AUTOMATICALLY RELEASE AIR FROM THE SEPARATOR. THE DESIGN AND CONSTRUCTION CONFORMS TO ASME SECTION VIII, DIV.1

CONSTRUCTION

SHELL: CARBON STEEL
COALESCING MEDIUM: STAINLESS STEEL
BLOW DOWN VALVE (OPTIONAL): BRONZE
SKIM VALVE (OPTIONAL): BRONZE
VENT (OPTIONAL): STAINLESS STEEL

PERFORMANCE LIMITATIONS

MAXIMUM DESIGN TEMPERATURE: 250°F
MAXIMUM DESIGN PRESSURE: 150 PSIG



DIMENSIONS AND WEIGHTS

	MODEL	CONN. SIZE	FLOW GPM	D (IN.)	H (IN.)	W (IN.)	A (IN.)	B (IN.)	WT LBS.
	ADSR-HV-2-F	2 FLG.	105	4-1/2	33	15-1/4	11-1/2	8-5/8	110
	ADSR-HV-2-FNPT	2 NPT.	105	4-1/2	33	10-3/8	11-1/2	8-5/8	100
	ADSR-HV-2.5-F	2-1/2 FLG.	155	5-9/16	33	15-3/4	11-1/2	8-5/8	140
	ADSR-HV-2.5-FNPT	2-1/2 NPT.	155	5-9/16	33	11	11-1/2	8-5/8	125
	ADSR-HV-3-F	3 FLG.	225	6-5/8	42	20-1/4	14-1/2	8-5/8	175
	ADSR-HV-3-FNPT	3 NPT.	225	6-5/8	42	12-1/2	14-1/2	8-5/8	155
	ADSR-HV-4-F	4 FLG.	405	8-5/8	42	20-5/8	14-1/2	8-5/8	275
	ADSR-HV-5-F	5 FLG.	630	10-3/4	59	27-3/4	19-1/2	8-5/8	475
	ADSR-HV-6-F	6 FLG.	910	12-3/4	59	27-3/4	19-1/2	8-5/8	525
	ADSR-HV-8-F	8 FLG.	1610	16	75	33-5/8	24-1/2	8-5/8	825
	ADSR-HV-10-F	10 FLG.	2450	20	92	37-1/2	32-1/2	8-5/8	1275
	ADSR-HV-12-F	12 FLG.	3500	24	110	42-1/2	38	8-5/8	2050

NOTE: LARGER SIZES ARE AVAILABLE UP TO 36 INCHES.

SPECIFICATION

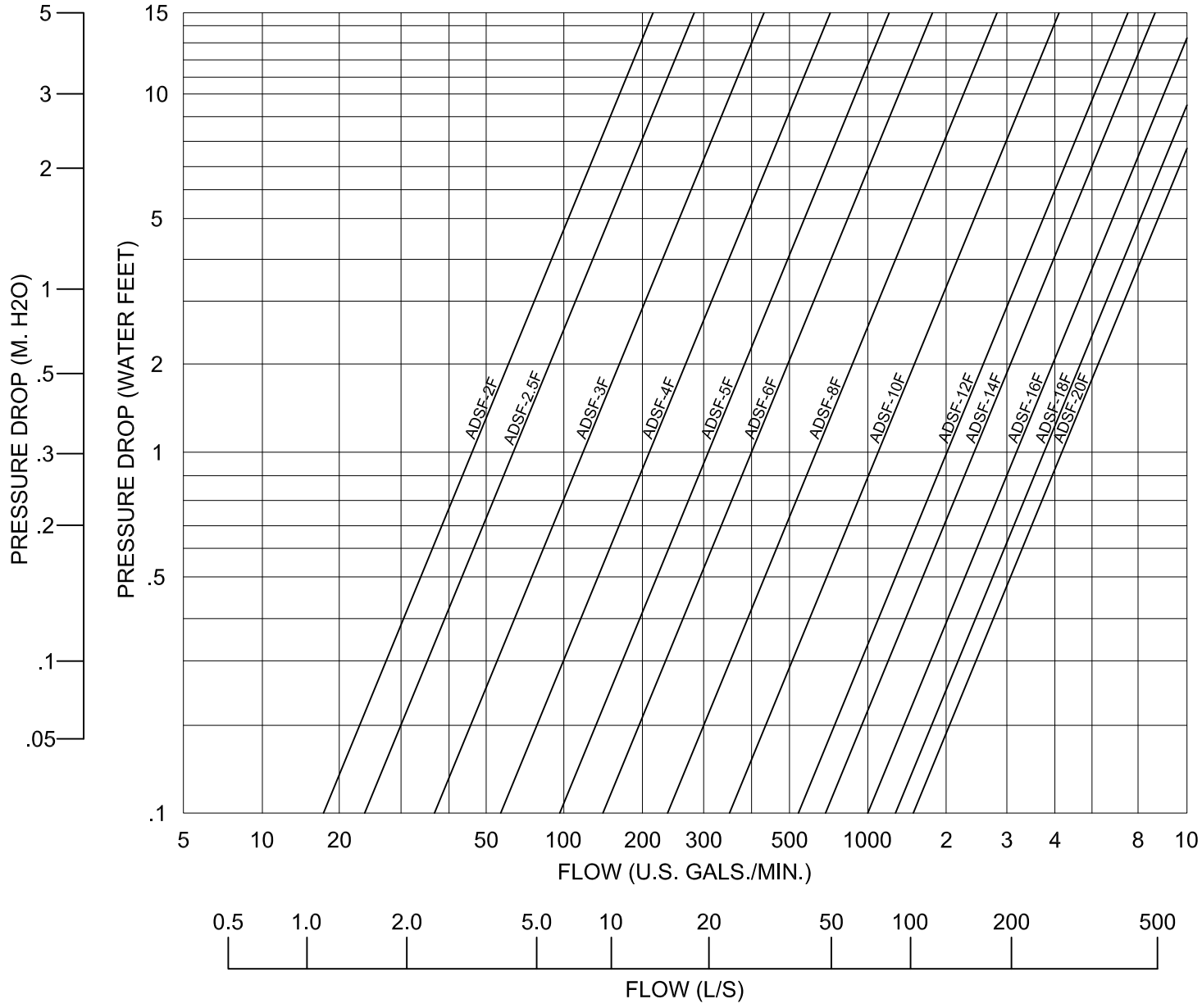
FURNISH AND INSTALL ON THE PLANS AND DESCRIBED HEREIN, A FLO FAB-VENT ADSR-HV (HIGH VELOCITY) AIR & DIRT SEPARATOR AS MANUFACTURED BY FLO FAB COMPANY. EACH SEPARATOR MUST BE DESIGNED WITH A BLOWDOWN VALVE, SKIM VALVE, AND AUTOMATIC AIR VENT. THE SEPARATOR MUST ALSO UTILIZE IN ITS DESIGN A STAINLESS STEEL COALESCING MEDIUM TO AID IN THE SEPARATION OF AIR AND DIRT IN THE SYSTEM ENTRAINED WATER. THE SEPARATOR MUST BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST REVISION OF THE ASME BOILER AND PRESSURE VESSEL CODE AND STAMPED 150 PSI WORKING PRESSURE.

EACH SEPARATOR SHALL BE FLO FAB MODEL ADSR-HV-_____OR APPROVED EQUAL.

FLO FAB

SUBMITTAL SHEET
ISSUE DATE: 2009/12/07
REVISION DATE: 2013/09/18
SECTION: 7

PERFORMANCE CURVE
HIGH VELOCITY
AIR & DIRT SEPARATOR
SERIES "ADSF"



FLO FAB AQUA PROFAB LAKE WORTH FLORIDA,U.S.A WWW.FLOFAB.COM	TITLE / TITRE: PERFORMANCE CURVE AIR & DIRT SEPARATOR - SERIES "ADSF"			
	PROJECT / PROJET			TAG
	CUSTOMER / CLIENT			DATE
DRAWN BY / DESSINÉ PAR M. LYMBURNER	DRAWING N° / N° DESSIN AIR & DIRT SEPARATOR - ADSF	LAYOUT	SCALE / ÉCHELLE N/A	REV. 0

FLO FAB

Manufacturer of Pumps, Tanks, Heat Exchangers & Accessories for HVAC Market After-Sales Parts and Services

www.flofab.com

FLO-FAB INC
LAKE WORTH,
FLORIDA, USA

SEPTEMBER 2009