



Compressed Air Purification Products

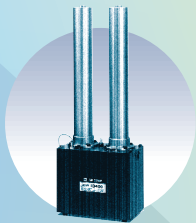


Table of Contents

Quick Reference Guide	3
Model Selection Guide	4,5
Refrigerated Dryers <i>Series IDU□E</i>	6, 7
High Inlet Temperature Refrigerated Dryers..... <i>Series IDFB□E</i>	8, 9
Membrane Air Dryers <i>Series IDG</i>	10, 11
Heatless Desiccant Compressed Air Dryers <i>Series IDW</i>	12, 13
Heatless Desiccant Air Dryers <i>Series ID</i>	14
Dew Point Conversion Chart	15
Compressed Air Filters <i>Series AM□/AFF</i>	16 - 19
Large Capacity Compressed Air Filters <i>Series AFW</i>	20, 21
Related Products	22
Digital Pneumatic Products Builder	23

Quick Reference Guide for Air Purification Products

- Shows standard combinations. The suffix numbers of the model indicate voltage, drain, indicators, etc. Refer to individual product info for details.
- Pairings with compressors are provided for reference purposes only. Always confirm actual performance/ratings and operating conditions in making selections.
- Combine filtration equipment as required for desired air quality
- After-cooling can be accomplished with air or water cooled after coolers or other means to reduce the inlet air temperature to acceptable levels.

Refrigerated Dryers

Air Compressor Power (hp) ¹⁾		Dryer Air Flow Capacity (scfm) ²⁾	After-cooling	Main Line Filter ³⁾	Refrigerated Air Dryer	Mist Separator ³⁾	Micro Mist Separator w/pre-filter ³⁾	Micro Mist Separator ³⁾	Super Mist Separator ³⁾	Odor Removal Separator ³⁾
Rotary Screw	Reciprocating									
2	3	10	Inlet air temperature must be reduced to 100°F for rated flow, max. 120°F	AFF2C-N02□	IDFB3E-□	AM150C-N02□	AMH250C-N03□	AMD250C-N03□	AME250C-N03□	AMF250C-N03□
3	5	15		AFF4C-N03□	IDFB4E-□	AM250C-N03□	AMH250C-N03□	AMD250C-N03□	AME250C-N03□	AMF250C-N03□
5	7.5	25		AFF4C-N03□	IDFB6E-□	AM250C-N03□	AMH350C-N04□	AMD350C-N04□	AME350C-N04□	AMF350C-N04□
7.5	10	41		AFF8C-N04□	IDFB8E-□	AM350C-N04□	AMH450C-N06□	AMD450C-N06□	AME450C-N06□	AMF450C-N06□
10	15	59		AFF11C-N06□	IDFB11E-□	AM450C-N06□	AMH450C-N06□	AMD450C-N06□	AME450C-N06□	AMF450C-N06□
15	20	71		AFF11C-N06□	IDFB15E-□	AM450C-N06□	AMH450C-N06□	AMD450C-N06□	AME450C-N06□	AMF450C-N06□
20	30	107		AFF22C-N10□	IDFB22E-□	AM550C-N10□	AMH550C-N10□	AMD550C-N10□	AME550C-N10□	AMF550C-N10□
30	50	161		AFF37B-N14□	IDFB37E-□	AM650-N14□	AMH650-N14□	AMD650-N14□	AME650-N14□	AMF650-N14□
50	60	226		AFF75B-N20□	IDFB55E-□	AM850-N20□	AMH850-N20□	AMD850-N20□	AME850-N20□	AMF850-N20□
60	75	300		AFF75B-N20□	IDFB75E-□	AM850-N20□	AMH850-N20□	AMD850-N20□	AME850-N20□	AMF850-N20□

- 1) Compressor hp ratings are provided for reference only and are based on commercially available sizes with nominal efficiencies, consult compressor manufacturer for actual ratings.
- 2) Rated flow is at 37°F pressure dew point at 100 psi. Performance is based on CAGI standard AF100 conditions: 100 psi inlet pressure, 100°F inlet and ambient temperature.
- 3) Pairing is based on dryer and filter flow ratings, not necessarily piping size.

High Inlet Temperature Refrigerated Dryers

Air Compressor Power (hp) ¹⁾		Dryer Air Flow Capacity (scfm) ¹⁾	After-cooling	Main Line Filter ⁴⁾	Refrigerated Air Dryer	Mist Separator ³⁾	Micro Mist Separator w/pre-filter ^{3),4)}	Micro Mist Separator ³⁾	Super Mist Separator ³⁾	Odor Removal Separator ³⁾
Rotary Screw	Reciprocating									
4.2	5.7	20	Inlet air temperature not to exceed 180°F	AFF4C-N03□	IDU6E-□	AM250C-N03□	AMH350C-N04□	AMD350C-N04□	AME350C-N04□	AMF350C-N04□
6.1	8.3	29		AFF8C-N04□	IDU8E-□	AM350C-N04□	AMH350C-N04□	AMD350C-N04□	AME350C-N04□	AMF350C-N04□
8.6	11.7	41		AFF8C-N04□	IDU11E-□	AM350C-N04□	AMH450C-N06□	AMD450C-N06□	AME450C-N06□	AMF450C-N06□
14.3	19.4	68		AFF11C-N06□	IDU15E1-□	AM450C-N06□	AMH450C-N06□	AMD450C-N06□	AME450C-N06□	AMF450C-N06□
21.9	29.7	104		AFF22C-N06□	IDU22E-□	AM550C-N10□	AMH550C-N10□	AMD550C-N10□	AME550C-N10□	AMF550C-N10□
30.9	42.0	147		AFF37B-N14□	IDU37E-□	AM650-N14□	AMH650-N14□	AMD650-N14□	AME650-N14□	AMF650-N14□
37.5	50.9	178		AFF37B-N14□	IDU55E-□	AM650-N14□	AMH650-N14□	AMD650-N14□	AME650-N14□	AMF650-N14□
47.8	64.9	227		AFF75B-N20□	IDU75E-□	AM850-N20□	AMH850-N20□	AMD850-N20□	AME850-N20□	AMF850-N20□

- 1) Compressor hp ratings are provided for reference only and are based on commercially available sizes with nominal efficiencies, consult compressor manufacturer for actual ratings.
- 2) Rated flow is at 50°F pressure dew point at 100 psi. Performance is based on the following conditions: 100 psi inlet pressure, 180°F inlet and 100°F ambient temperature.
- 3) Pairing is based on dryer and filter flow ratings, not necessarily piping size.
- 4) Series AFF is limited to 140°F inlet/ambient temperature, use series APW for higher temperatures.

Heatless Regenerative Dryers

Air Compressor Power (hp) ¹⁾		Dryer Air Flow Capacity (scfm) ²⁾	After-cooling	Main Line Filter ³⁾	Mist Separator ³⁾	Micro Mist Separator w/pre-filter ³⁾	Micro Mist Separator ³⁾	Heatless Desiccant Air Dryer	Super Mist Separator ³⁾	Odor Removal Separator ³⁾	
Rotary Screw	Reciprocating										
0.8	1	4	Inlet air temperature must be reduced to 100°F for rated flow, max. 120°F	AFF2C-N02□	AFW30-N03-EA (provided with dryer)			IDW04N	AME150C-N02□	AMF150C-N02□	
1	1.5	6		AFF2C-N02□				IDW06N	AME150C-N02□	AMF150C-N02□	
1.5	2	8		AFF2C-N02□				IDW08N	AME250C-N03□	AMF250C-N03□	
2	2.5	10		AFF2C-N02□				IDW10N	AME250C-N03□	AMF250C-N03□	
3	3	15		AFF4C-N03□				IDW15N	AME250C-N03□	AMF250C-N03□	
5	5	25		AFF4C-N03□				IDW25N	AME350C-N04□	AMF350C-N04□	
7.5	10	35		AFF8C-N04□				IDW35N	AME350C-N04□	AMF350C-N04□	
10	10	45		AFF8C-N04□	AFF8C-N04□	AM350C-N04□	AMH450C-N06□	AMD450C-N06□	IDW45N	AME450C-N06□	AMF450C-N06□
10	15	55		AFF11C-N06□	AFF11C-N06□	AM450C-N06□	AMH450C-N06□	AMD450C-N06□	IDW55N	AME450C-N06□	AMF450C-N06□
15	15	65		AFF11C-N06□	AFF11C-N06□	AM450C-N06□	AMH450C-N06□	AMD450C-N06□	IDW65N	AME450C-N06□	AMF450C-N06□
15	20	85		AFF22C-N10□	AFF22C-N10□	AM550C-N10□	AMH550C-N10□	AMD550C-N10□	IDW85N	AME550C-N10□	AMF550C-N10□
20	25	105		AFF22C-N10□	AFF22C-N10□	AM550C-N10□	AMH550C-N10□	AMD550C-N10□	IDW105N	AME550C-N10□	AMF550C-N10□
25	30	135		AFF37B-N14□	AFF37B-N14□	AM650-N14□	AMH650-N14□	AMD650-N14□	IDW135N	AME650-N14□	AMF650-N14□
30	50	175		AFF37B-N14□	AFF37B-N14□	AM650-N14□	AMH650-N14□	AMD650-N14□	IDW175N	AME650-N14□	AMF650-N14□
50	50	215		AFF75B-N20□	AFF75B-N20□	AM850-N20□	AMH850-N20□	AMD850-N20□	IDW215N	AME850-N20□	AMF850-N20□
50	75	275		AFF75B-N20□	AFF75B-N20□	AM850-N20□	AMH850-N20□	AMD850-N20□	IDW275N	AME850-N20□	AMF850-N20□
75	100	365		AFF75B-N20□	AFF75B-N20□	AM850-N20□	AMH850-N20□	AMD850-N20□	IDW365N	AME850-N20□	AMF850-N20□

- 1) Compressor hp ratings are provided for reference only and are based on commercially available sizes with nominal efficiencies, consult compressor manufacturer for actual ratings.
- 2) Rated flow is at -40°F pressure dew point at 100 psi. Performance is based on CAGI standard AF100 conditions: 100 psi inlet pressure, 100°F inlet and ambient temperature.
- 3) Pairing is based on dryer and filter flow ratings, not necessarily piping size.

Compressed Air Purification System Series Selection Guide

Description	Main Line		Sub Line			Local Line					
	Air Tank	After-cooler	Main Line Filter	Refrigerated Air Dryer		Water Separator	Mist Separator	Heatless Air Dryer	Micro Mist Separator w/ Pre-filter	Micro Mist Separator	Membrane Air Dryer
Series	AT	HAA, HAW	AFF/AFW	IDFB	IDU	AMG	AM	ID	AMH	AMD	IDG
Flow Capacity Scfm	Capacity 26 to 793 gal	35 to 201 10 to 635	10 to 1500	10 to 300	11 to 120	10 to 424 (AFW: 150 to 1500)		2.82 to 27.54	7 to 424	7 to 424 (AFW: 150 to 1500)	0.35 to 35.31
Max. Inlet Air Temperature	212°F	158°F 158°F, 356°F (Varies by Model)	140°F (250°F AFW)	122°F	180°F	140°F (250°F AFW)		122°F	140°F (250°F AFW)		122°F, 131°F (Varies by model)
Filtration (Filtering Efficiency)			3 μm (99%)			Water droplet removal ratio 99%	0.3 μm (99.9%)			0.01 μm (With 0.3 mm pre-filter)	0.01 μm (99.9%)
Outlet Oil Mist Concentration (Max.)(1)						1 mg/m³(ANR) [@ 0.8 ppm]				0.1 mg/m³ (ANR) [@ 0.08 ppm]	
Pressure Dew Point					+37.4°F 100°F Inlet, 100°F Ambient 100 psi Inlet Pressure			+16.2°F (-26.2°F) 95°F Inlet, 95°F Ambient, 105.1 psi Inlet Pressure			+43°F +55°F 77°F Inlet, 77°F Ambient, 105.1 psi Inlet Pressure

Note 1) When inlet oil mist concentration (compressor discharge concentration) is approx. 30 mg/m³ (ANR) or less.
 Note 2) This describes the grade of compressed air quality based on ISO8573-1: 2010 (JIS B8392-1: 2003), which is the maximum quality grade for the system. It varies, however, depending on inlet air conditions.
 Note 3) Please contact SMC since this can be manufactured as a special order (depending on the operating conditions).

Compressed Air Quality Classes

per ISO 8573-1:2010

Class	Solid Particle				Moisture		Oil	
	Max. number of particles / m ³				Pressure dew point (at 101.5 psi)		Oil concentration	
	Particle size d μm				μm		mg/m ³	
	≤ 0.10	0.10 < d ≤ 0.5	0.5 < d ≤ 1.0	1.0 < d ≤ 5.0	μm	mg/m ³	Class	Oil concentration
1	Not specified	100	1	0	NA	NA	1	≤ 0.01
2	Not specified	100,000	1,000	10	NA	NA	2	≤ 0.1
3	Not specified	Not specified	10,000	500	NA	NA	3	≤ 1
4	Not specified	Not specified	Not specified	1,000	NA	NA	4	≤ 5
5	Not specified	Not specified	Not specified	20,000	≤ 5	≤ 5	5	≤ +45
6		NA			≤ 40	≤ 10	6	≤ +50
7		NA						

Example: The degree of quality is indicated with 1, 4, 2 for systems with solid particle "class 1," moisture "class 4" and oil "class 2."

Membrane Air Dryer	Super Mist Separator	Odor Removal Filter	Clean Air Filter	Clean Gas Filter
IDG	AME	AMF	SFD	SFA, SFB, SFC
2.65 to 10.6 1.77 to 5.29	7 to 424	7 to 424 (AFW: 150 to 1500)	3.5 to 18	0.9 to 10
122°F	140°F		113°F	176°F, 248°F (Varies by model)
		0.01 μm (99.9%)	0.01 μm (99.99%)	0.01 μm (99.99%)
	0.01 mg/m ³ (ANR) [@ 0.008 ppm]	0.004 mg/m ³ (ANR) [@ 0.0032 ppm]		
(-4°F) (-44°F) 77°F Inlet, 77°F Ambient, 105.1 psi Inlet Pressure				

System	Application Example	Impurity In Compressed Air Of System					
		Moisture		Filtration	Oil mist concentration (1)	Oil odor	Quality grade for system(2)
		Dew point	Moisture contents				
A	Water drop removed air	Atmospheric press. dew point 42°F (101.5psi)	7 g/m ³ (ANR) (101.5psi, at 77°F)	3 μm (Filtering efficiency 99%)			3, -, -
	<ul style="list-style-type: none"> Air blowing (Simple removal of particles) General pneumatic tools 						
B	Dry air						3, 4, -, 3, 5, -, 3, 6, -
	<ul style="list-style-type: none"> Used for the same applications as above, when temperature drop in the middle of piping is large. 						
C	Dry air			0.3 μm (Filtering efficiency 99%)	Max. 1 mg/m ³ (ANR)	Yes	2, 4, 3, 2, 5, 3, 2, 6, 3
	<ul style="list-style-type: none"> General pneumatic equipment General painting 				0.8 ppm		
D	Dry clean air	Atmospheric pressure dew point 6.8°F to -9.4°F	1.7 g/m ³ (ANR) to 0.8 g/m ³ (ANR)		Max. 0.1 mg/m ³ (ANR)		1, 4, 2, 1, 5, 2, 1, 6, 2
	<ul style="list-style-type: none"> High grade painting Sequence control Measurement device Instrumentation Drying and cleaning (Precision parts) Machine tools (Pneumatic bearing) 	101.5psi Pressure dew point 59 to 37.4°F			0.08 ppm		
E	Dry clean air				Max. 0.01 mg/m ³ (ANR)		1, 4, 1, 1, 5, 1, 1, 6, 1
	<ul style="list-style-type: none"> Without refrigerated air dryer on the sub line Built-in with equipment (With machine tools, 3-D measurement device, etc.) 				0.008 ppm		
F	Deodorant air			0.01 μm (Filtering efficiency 99%)	Max. 0.004 mg/m ³ (ANR)	No	
	<ul style="list-style-type: none"> Stirring, transporting, drying and packaging Food industry (Except direct blowing to foods) 				0.0032 ppm		
G	Low dew point clean air	Atmospheric pressure dew point -22 to -76°F	0.5 g/m ³ (ANR) to 0.02 g/m ³ (ANR)		Max. 0.01 mg/m ³ (ANR)	Yes	1, 1, 1, 1, 2, 1, 1, 3, 1, 1
	<ul style="list-style-type: none"> Drying electric and electronic parts Drying a filling tank Transporting powders Ozone generator Low temperature actuated equipment 				0.008 ppm		
H	Low dew point clean air (For clean room)	101.5psi Pressure dew point 21.2 to -43.6°F			Max. 0.004 mg/m ³ (ANR)	No	
	<ul style="list-style-type: none"> Blowing semiconductor parts in the clean room 				0.0032 ppm		



145 psi = 1 MPa, 1 SCFM = 28.32 l/min
1 in = 25.4mm, °C = 5/9 (°F - 32)

Series IDFB□E Dryer Features

- Environmentally friendly R134a/R407C refrigerant
- Simple control system, incorporating easy to read evaporator gauge
- Stainless steel heat exchanger providing long life and low pressure drops
- Compact design with staggered inlet/outlet ports for ease of installation
- 3/8" push-in condensate drain port



IDFB□E Dryer Technical Specifications

Model	Flow scfm at pressure dewpoints ¹⁾			Power supply AC 60Hz	Power Consumption (KW)	Port Connections (NPT)	Refrigerant	Weight lbs	Dimensions Inches		
	37°F	45°F	50°F						A	B	C
IDFB3E-11N	10	11	12	Single Phase 115V	0.24	3/8"	R134a	40	8.9	16.1	18.6
IDFB4E-11N	15	16	17		0.26	1/2"		55			
IDFB6E-11N	25	26	28		0.31	3/4"		57	10.6	17.7	19.5
IDFB8E-11N	41	43	45					64			
IDFB11E-11N	59	62	65					73			
IDFB15E-11N	71	80	86		1	1"		110	11.8	23.7	22.8
IDFB22E-11N	107	120	130					119	11.4	30.5	24.5
IDFB22E-23N				137	33.7						
IDFB37E-23N	161	173	181	Single Phase 230V	1.27	1-1/2"	137	11.4	33.7	24.5	
IDFB55E-30N-X224 ²⁾	226	258	297	Three Phase 220V	1.7	2"	R407C	220	18.5	33.7	31.5
IDFB55E-46N				2.4	258						
IDFB75E-30N-X224 ²⁾				2.5	255						
IDFB75E-46N				2.4	271						

1. Flow capacities are based on CAGI (Compressed Air and Gas Institute) standard ADF100: Refrigerated Compressed Air dryers - Method for testing and rating. The reference conditions are - Inlet air temperature: 100°F, Ambient temperature: 100°F, Inlet pressure: 100 psi.
2. Dryer models IDFB55E-30-X224 and IDFB75E-30-X224 are not UL certified.

If Your Operating Conditions Are Other Than Standard Reference Conditions Stated Above, Please Make Use Of The Following Capacity Correction Factors To Size A Suitable Dryer For Your Application.

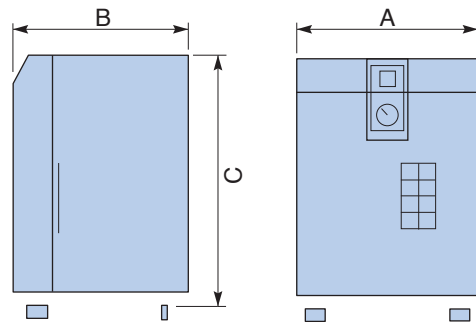
Correction Factors

Inlet Air Temperature °F	90	100	110	120
Correction Factor (A) IDFB3E-37E	1.31	1.00	0.82	0.66
Correction Factor (A) IDFB55E-75E	1.08	1.00	0.83	0.46

Ambient Air Temperature °F	77	90	95	100	105	110
Correction Factor (B)	1.24	1.09	1.04	1.00	0.98	0.95

Inlet Pressure psig	75	100	110	120	125	150	175	200	250
Correction Factor (C)	0.95	1.00	1.04	1.07	1.09	1.13	1.18	1.22	1.24

Dimensions



Example Of Selecting A Suitable Dryer:

- Operating air flow rate: 50 scfm
- Ambient temperature: 105°F
- Inlet air temperature: 110°F
- Inlet air pressure: 120 psig
- Corrected air flow rate = Operating air flow rate / (Factor A x Factor B x Factor C.)
= 50 / (0.82 x 0.98 x 1.07) = 58.15 scfm

Select a model with nominal air flow rate higher than the corrected air flow rate calculated in the formula above.

The dryer model: IDFB11E-11N providing 59 scfm at 37°F pressure dew point

Common Optional Specifications



Option Symbol

Cool Compressed Air Output

IDFB3E to 11E

There is no reheating of the cooled, dehumidified air as it leaves the air dryer. The outlet temperature is 50°F when supplied with 100 psi, 100°F compressed air and the dryer is operated in a 100°F environment. The external dimensions are identical to the standard product, but the air flow capacity for this option is reduced from the standard model.



Option Symbol

Medium Pressure Specification - 232 Psi
(Heavy Duty Auto Drain)

IDFB55E, 75E

The auto drain is changed to a heavy duty type (ADH4000) to permit operation at 232 psi. The external dimensions are identical to the standard product with no changes to the rated air flow capacity.



Option Symbol

Medium Pressure Specification - 232 Psi
(Metal Auto Drain Bowl With Level Gauge)

IDFB6E to 37E

The auto drain is changed to a metal bowl unit to permit operation at 232 psi. The level gauge is incorporated to provide visibility to the level of accumulated drain within the bowl. The external dimensions are identical to the standard product with no changes to the rated air flow capacity.



Option Symbol

Medium Pressure Specification - 232 psi
(Timer Type Auto Drain)

IDFB4E to 75E

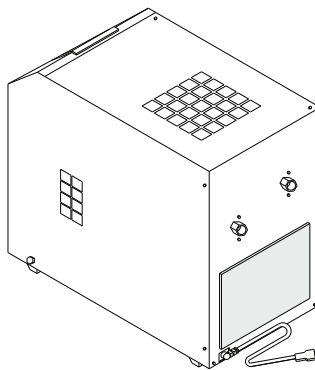
The auto drain is changed to a timer type solenoid valve unit to permit operation at 232 psi. A strainer for solenoid valve protection and a stop valve are also included. The valve actuates once every 30 seconds for 0.5 seconds. The external dimensions are identical to the standard product with no changes to the rated air flow capacity.

IDFB□E Dryer Accessory

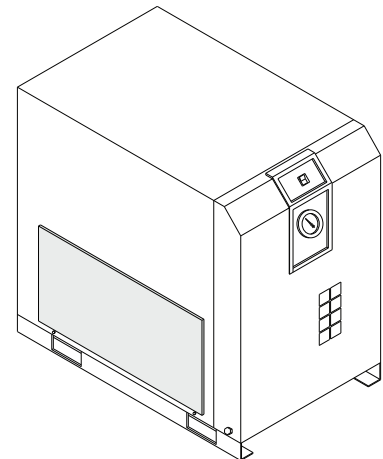
- Dust-protecting Filter System

Dimensions

Part no.	Applicable Dryer
IDF-FL209	IDFB3E
IDF-FL203	IDFB4E
	IDFB6E
IDF-FL204	IDFB8E
IDF-FL205	IDFB11E
IDF-FL206	IDFB15E
IDF-FL208	IDFB22E
	IDFB37E
IDF-FL213	IDFB55E
IDF-FL214	IDFB75E



(IDF-FL209)



(IDF-FL203 to 208, 213, 214)

- Bypass piping kit consult factory

Series IDU□E Dryer Features

- Environmentally friendly R134a/R407C refrigerant
- Simple control system, incorporating easy to read evaporator gauge
- Stainless steel heat exchanger providing long life and low pressure drops
- Compact design with staggered inlet/outlet ports for ease of installation
- Built-In After-Cooler (except IDU6E)



IDF□E Dryer Technical Specifications

Model	Flow scfm at Pressure Dew Points			Power Supply AC 60Hz	Power Consumption (KW)	Port Size	NPT Piping Adapter	Refrigerant	Weight lbs	Dimensions inches		
	37°F	45°F	50°F							A	B	C
IDU6E-10-K	11	16	20	Single Phase 120VAC	0.44	3/4" Rc	IDF-AP603	R134a	62	10.6	19.1	22.4
IDU8E-10-K	16	24	29		0.29				97			33.8
IDU11E-10-K	23	34	41		0.47				104			35.8
IDU15E1-10-K	37	56	68		0.53	1" Rc	IDF-AP605		157	11.8	24.4	37.8
IDU22E-30-L	57	86	104	Three Phase 220VAC	1.45	1" R	IDF-AP604	R407C	199	12.8	30.5	45.4
IDU37E-30-L	81	122	147		2	1-1/2" R	IDF-AP606		287	14.2	34.9	49.5
IDU55E-30-L	94	146	178		2.85	2" R	IDF-AP607		353	18.5		53
IDU75E-30-L	120	186	227		366				58.3			

1. Flow capacities are based on Inlet air temperature: 180°F, Ambient temperature: 100°F, Inlet pressure: 100psi.
 2. All dryer models listed are rated for 232 psi.
 3. Please be sure to order corresponding NPT piping adapter.

If Your Operating Conditions Are Other Than Standard Reference Conditions Stated Above, Please Make Use Of The Following Capacity Correction Factors To Size A Suitable Dryer For Your Application.

Correction Factors

IDU6-37E

Inlet Air Temperature°F	41 to 113	120	130	140	150	160	170	180
Correction Factor (A)	1.49	1.40	1.29	1.22	1.14	1.09	1.04	1

IDU6-37E

Ambient Air Temperature°F	35.6 to 77	80	85	90	95	100	105	110
Correction Factor (B)	1.36	1.30	1.2	1.13	1.06	1	0.95	0.91

IDU55, 75E

Inlet Air Temperature°F	41 to 113	120	130	140	150	160	170	180
Correction Factor (A)	1.75	1.62	1.46	1.26	1.10	1.07	1.03	1

IDU55, 75E

Ambient Air Temperature°F	35.6 to 77	80	85	90	95	100	105	110
Correction Factor (B)	1.67	1.61	1.49	1.35	1.19	1	0.80	0.58

IDU6-37E

Inlet Pressure	psi	30	40	50	60	70	80	90	100	110	120	130	145 to 232
Correction Factor (C)		0.63	0.7	0.76	0.82	0.87	0.92	0.97	1	1.04	1.08	1.11	1.15

IDU55, 75E

Inlet Pressure	psi	30	40	50	60	70	80	90	100	110	120	130	145 to 232
Correction Factor (C)		0.63	0.68	0.73	0.785	0.84	0.9	0.96	1	1.055	1.11	1.165	1.239

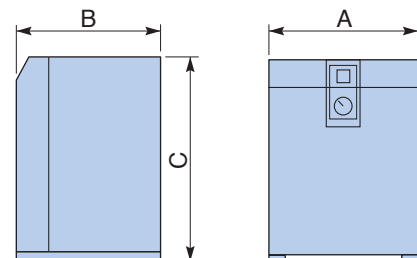
Example of selecting a suitable dryer:

- Operating air flow rate: 50 scfm
- Required dew point: 45°F
- Inlet air temperature: 167°F
- Corrected air flow rate = Operating air flow rate / (Factor A x Factor B x Factor C.) = 50 / (1/05 x 0.95 x 1.165) = 43.04 scfm
- Ambient temperature: 105°F
- Inlet air pressure: 130 psig

Select a model with nominal air flow rate higher than the corrected air flow rate calculated in the formula above.

The dryer model: IDU15E1-10-K providing 56 scfm @ 45°F pressure dew point

Dimensions



Common Optional Specifications



Option Symbol

Medium Pressure Specification - 232 Psi
(Metal Auto Drain Bowl with Level Gauge)

IDU6E to 15E1

The auto drain is changed to a metal bowl unit to permit operation at 232 psi. The level gauge is incorporated to provide visibility to the level of accumulated drain within the bowl. The external dimensions are identical to the standard product with no changes to the rated air flow capacity.



Option Symbol

Medium Pressure Specification - 232 Psi
(Timer Type Auto Drain)

IDU6E to 75E

The auto drain is changed to a timer type solenoid valve unit to permit operation at 232 psi. A strainer for solenoid valve protection and a stop valve are also included. The valve actuates once every 30 seconds for 0.5 seconds. The external dimensions are identical to the standard product with no changes to the rated air flow capacity.



Option Symbol

Medium Pressure Specification - 232 Psi
(Heavy Duty Auto Drain)

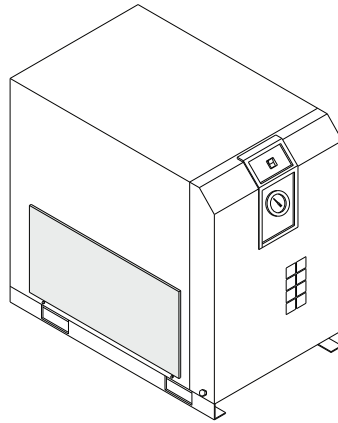
IDU6E to 75E

The auto drain is changed to a heavy duty type (ADH4000) to permit operation at 232 psi. This drain is externally mounted for IDU6E - IDU15E1 but results in no change to external dimensions for IDU22E - 75E. There are no changes to the rated air flow capacity.

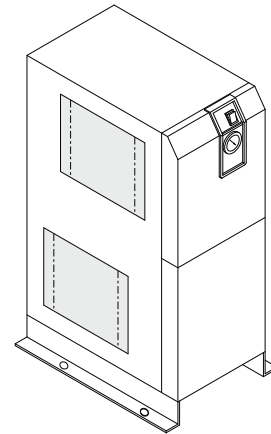
IDF□E Dryer Accessory

Dust Filter Set

Model	Applicable Dryer
IDF-FL205	IDU6E
IDU-FL210	IDU8E
IDU-FL211	IDU11E
IDU-FL212	IDU15E1
IDU-FL215	IDU22E
IDU-FL216	IDU37E
IDU-FL217	IDU55E
IDU-FL218	IDU75E



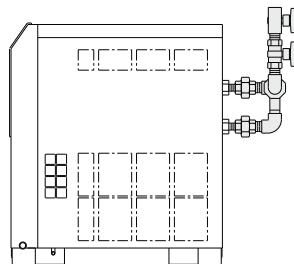
(IDF-FL205)



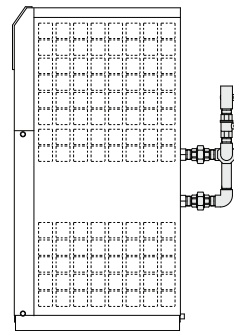
(IDU-FL210 to 218)

Bypass Piping Set

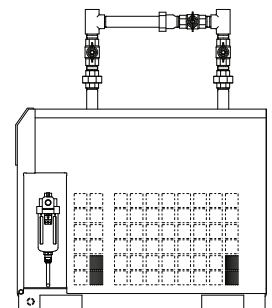
Model	Applicable Dryer
IDU-BP307	IDU6E
IDU-BP320	IDU8E, IDU11E
IDU-BP322	IDU15E1
IDU-BP336	IDU22E
IDU-BP337	IDU37E
IDU-BP338	IDU55E, IDU75E



(IDU-BP307)



(IDU-BP320 and 322)



(IDU-BP336 to 338)

Series IDG Features

- Membrane technology (environmentally friendly)
- Outlet flow capabilities up to 35 SCFM
- No moving parts, vibration, or heat discharge
- Dew points as low as -76°F atmospheric
- Integral dew point indicator standard (optional on sizes 3, 5)



Specifications

For details of how to order contact SMC or refer to catalog No. CAT ES30-7F

Single Type -4°F (-20°C) Atmospheric Dew Point 44°F (6.6°C) Pressure dew point @ 100 psi

Model		Flow scfm (l/min[ANR])			Port NPT	Weight lbs (kg)	Bracket
W/Purge Air Discharge Fitting	W/O Purge Air Discharge Fitting	Inlet	Outlet	Purge			
IDG1-N02-P	IDG1-N02	0.44 (12.5)	0.35 (10)	0.09 (2.5)	1/4"	0.24 (11)	-
IDG3-N02-PS	IDG3-N02-S	1.09 (31)	0.88 (25)	0.21 (6)		0.55 (25)	BM59
IDG5-N02-PS	IDG5-N02-S	2.19 (62)	1.77 (50)	0.42 (12)		3/8"	0.95 (0.43)
IDG10-N03-P	IDG10-N03	4.41 (125)	3.53 (100)	0.88 (25)	1.46 (0.66)		BM63
IDG20-N03-P	IDG20-N03	8.83 (250)	7.06 (200)	1.77 (50)	1.72 (0.78)		BM64
IDG30A-N03-P	IDG30A-N03	12.71 (360)	10.59 (300)	2.12 (60)	1.79 (0.81)		
IDG50A-N03-P	IDG50A-N03	20.69 (586)	17.66 (500)	3.04 (86)	1/2"	3.31 (1.5)	BM65
IDG60-N04-P	IDG60-N04	25.6 (725)	21.19 (600)	4.41 (125)		3.42 (1.55)	
IDG75-N04-P	IDG75-N04	31.78 (900)	26.49 (750)	5.29 (150)			
IDG100-N04-P	IDG100-N04	42.02 (1,190)	35.31 (1,000)	6.71 (190)			

Single Type -40°F (-40°C) Atmospheric Dew Point 2.6°F (-16.3°C) Pressure Dew Point @ 100 psi

Model		Flow scfm (l/min[ANR])			Port NPT	Weight lbs (kg)	Bracket
W/Purge Air Discharge Fitting	W/O Purge Air Discharge Fitting	Inlet	Outlet	Purge			
IDG30LA-N03-P	IDG30LA-N03	3.28 (93)	2.65 (75)	0.64 (18)	3/8"	1.72 (0.78)	BM64
IDG50LA-N03-P	IDG50LA-N03	4.77 (135)	3.88 (110)	0.88 (25)		1.79 (0.81)	
IDG60LA-N04-P	IDG60LA-N04	7.91 (224)	6 (170)	1.91 (54)	1/2"	3.44 (1.56)	BM65
IDG75LA-N04-P	IDG75LA-N04	10.88 (308)	8.48 (240)	2.4 (68)		3.73 (1.69)	
IDG100LA-N04-P	IDG100LA-N04	14.13 (400)	10.59 (300)	3.53 (100)		4.01 (1.82)	

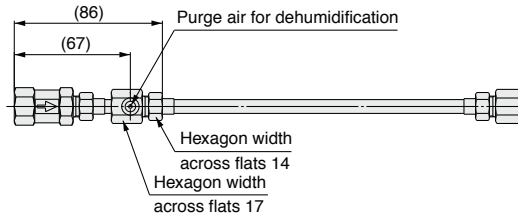
Single Type -76°F (-40°C) Atmospheric Dew Point 38.2°F (-39°C) Pressure Dew Point @ 100 psi

Model		Flow scfm (l/min[ANR])			Port NPT	Weight lbs (kg)	Bracket
W/Purge Air Discharge Fitting	W/O Purge Air Discharge Fitting	Inlet	Outlet	Purge			
IDG60SA-N04-P	IDG60SA-N04	2.65 (75)	1.77 (50)	0.88 (25)	1/2"	3.44 (1.56)	BM65
IDG75SA-N04-P	IDG75SA-N04	4.94 (140)	3.53 (100)	1.41 (40)		3.73 (1.69)	
IDG100SA-N04-P	IDG100SA-N04	8.12 (230)	5.3 (150)	2.83 (80)		4.01 (1.82)	

- Flow rates indicated are at ambient temperature of 68°F at atmospheric pressure.
- All dryers listed are equipped with a dew point indicator (except IDG1) and with or without fitting for purge air exhaust.
- Flow rates include 0.04 scfm (1 l/min) of purge air flow at 100 psi inlet air pressure for the dew point indicator (except for IDG1, 3, 5)
- SMC recommends the use of mist separator (Series AFM) and micro mist separator (Series AFD) or Micro Mist Separator with Pre-filter (Series AMH) at the inlet of IDG membrane dryer.

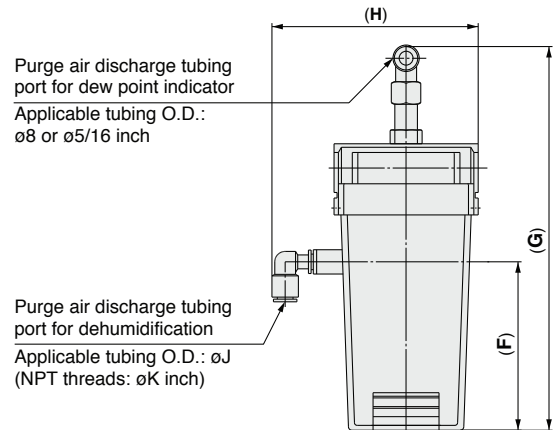
Dimensions (in)

IDG1



IDG3, 5, 10, 20

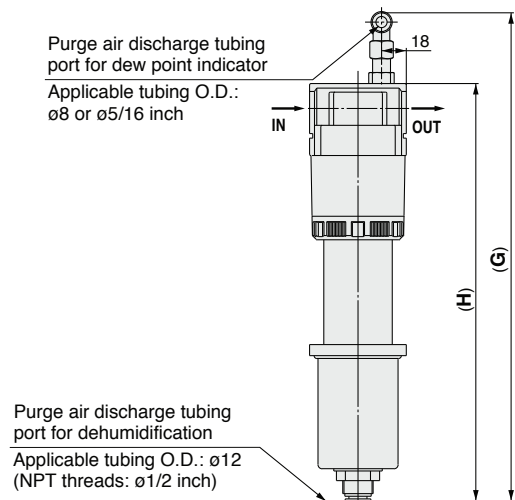
Model	Port size L	A	B	C
IDG3, 5	1/4	2.9	5.5	1.6
IDG10	3/8	3.23	7.4	2.1
IDG20		4.45	8.35	2.1



IDG 30, 50, 60, 75, 100

With fitting for purge air discharge (Option: P)

Model	Port size L	A	B
IDG30A, 30LA	3/8	2.75	14.2
IDG50A, 50LA			15.7
IDG60	1/2	3.2	16.9
IDG75, 100			16.8
IDG60LA, 60SA			19.5
IDG75LA, 75SA			22.0
IDG100LA, 100SA			



Also available:

Series IDG is available pre-assembled with recommended pre-filtration and optional regulation. Type M assemblies consist of pre-filtration and membrane dryer while the type V assemblies add a pressure regulator on the outlet. Most models are equipped with AFM mist separators and AFD micro mist separators. IDG60(H)-IDG100(H) assemblies utilize AMH micro mist separators with pre-filter.



M type

example: IDG50AM4-N03



V type

example: IDG50AV4-N03

Series IDW Features

- -40°F dew point standard, -100°F optional
- Suitable for global installation - 12~24VDC or 100~240VAC
- Designed for simple service with desiccant canisters
- Vertical or horizontal mounting
- Intelligent electronic processor

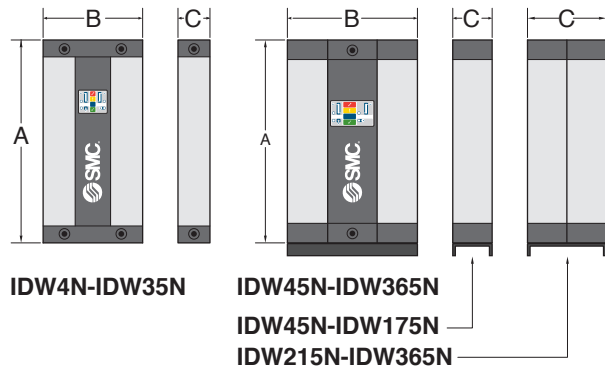


Specifications

Dryer Model	Connection Size	Flow Rate (scfm)			Dryer Configuration	Dimension (inch)			Weight (lbs)
		Inlet (max)	Outlet (max)	Purge		A	B	C	
IDW04N	3/8"	4	3.2	0.8	Simplex	17.5	11	3.6	29
IDW06N		6	4.8	1.2		20			31
IDW08N		8	6.4	1.6		22			33
IDW10N		10	8	2		25			36
IDW15N		15	12	3		32			43
IDW25N		25	20	5		42			53
IDW35N	3/4"	35	28	7		57.5	20.5	7	68
IDW45N		45	36	9		28			117
IDW55N		55	44	11		31.8			130
IDW65N	65	52	13	36		141			
IDW85N	1"	85	68	17		43.5			165
IDW105N		105	84	21		55.8			200
IDW135N	1-1/4"	135	108	27		63.5			224
IDW175N		175	140	35		79.5			271
IDW215N		215	172	43	55.8	378			
IDW275N	1-1/2"	275	220	55	63.5	13.5			422
IDW365N		365	292	73	79.5				510

1. Models IDW04N to IDW35N will include a 0.01mm coalescing prefilter (model AFW30-N03-EA). A similar prefilter is recommended for the larger sizes (series AMH or series AFW with EA element).
2. For models IDW45N to IDW365N, the dryer will include a drain adapter kit to allow assembly of the filter to the dryer. This kit consists of a 4mm X 1/4" NPT male elbow and tubing.
3. Simplex models have two desiccant columns (1 per side) while duplex models have four (two per side).

Standard Pressure Dew Point	-40°F
Optional Pressure Dew Point	-100°F
Minimum Working Pressure	58 psig
Maximum Working Pressure	232 psig
Power Supply	12VDC to 24VDC or 100VAC to 240VAC
Minimum Inlet Temperature	35°F
Maximum Inlet Temperature	122°F
Minimum Ambient Temperature	41°F
Purge Rate	20%



Dryer Correction Factors

Operating Pressure (psig)	58	72	87	100	116	130	130	145	160	174	189	203	218	232
Pressure Correction Factor (PCF)*	0.62	0.75	0.87	1	1.12	1.25	1.25	1.37	1.5	1.62	1.75	1.87	2.0	2.12

Temperature (°F)	68	77	86	95	104	113	122
Temp. Correction Factor (TCF)	1.07	1.06	1.04	1.00	.088	0.78	0.55

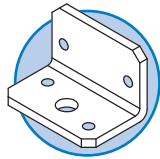
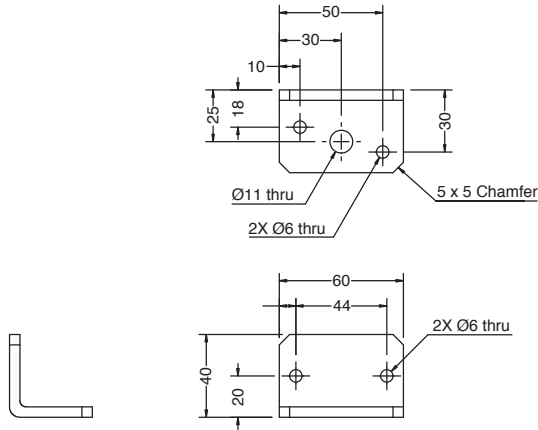
Dew Point (°F)	-40	-100
Dew Point Correction Factor (DCF)	1	0.7

*Always use the pressure correction factor (PCF) closest to the actual inlet pressure condition
 Corrected air flow rate = Required air flow rate / (PCF x TCF x DCF)

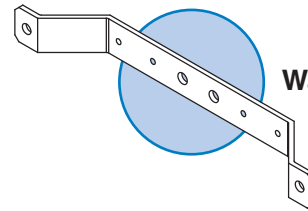
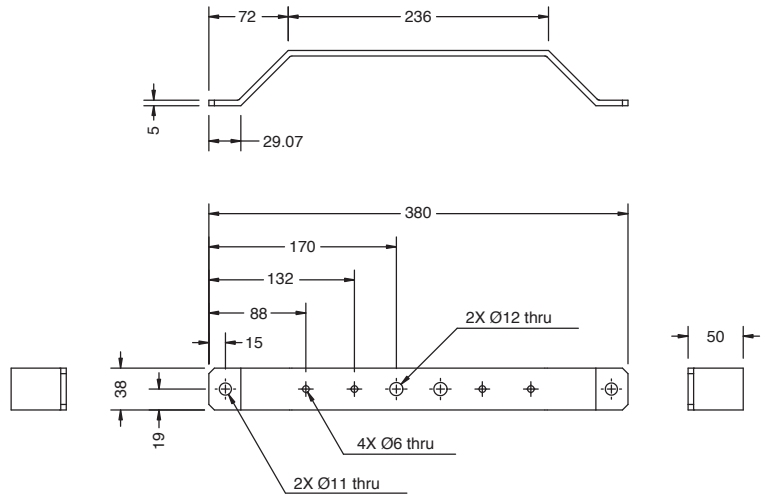
Accessories

Part Number	Description	Applicable Models
IDWFB35	Foot Mounting Bracket Kit	IDW04N~35N
IDWWB35	Wall Mounting Bracket Kit	
IDWCD01	Energy Management Software CD	ALL

The energy management software CD enables the user to interface with the controller to work with the energy management settings. Each CD has unique information to a particular dryer and must be matched by serial number. If ordered at time of dryer order, they should be properly paired. If ordering CD by itself, please provide the dryer serial number so that the appropriate info can be loaded. Full software compatibility is not guaranteed if used with different dryer units.



Foot Bracket



Wall Bracket

Dimensions in mm

Service Parts

Dryer Model	12,000 Hour Service Kit		24,000 Hour Service Kit		Valve Service Kit	
	Part Number	Contents	Part Number	Contents	Part Number	Contents
IDW04N	IDWC04-12000	Desiccant cartridges, pack of sealing O-rings and washers, reset cap, instruction booklet	IDWC04-24000	12,000 hour service kit, valve service kit	IDWVSKS01	Exhaust solenoid valves, diaphragms, shuttle valve and O-rings, required seals (not included in 12,000 hour kits)
IDW06N	IDWC06-12000		IDWC06-24000			
IDW08N	IDWC08-12000		IDWC08-24000			
IDW10N	IDWC10-12000		IDWC10-24000			
IDW15N	IDWC15-12000		IDWC15-24000			
IDW25N	IDWC25-12000		IDWC25-24000			
IDW35N	IDWC35-12000		IDWC35-24000		IDWVSKS02	
IDW45N	IDWC45DF-12000		IDWC45DF-24000			
IDW55N	IDWC55DF-12000		IDWC55DF-24000			
IDW65N	IDWC65DF-12000		IDWC65DF-24000			
IDW85N	IDWC85DF-12000		IDWC85DF-24000			
IDW105N	IDWC105DF-12000		IDWC105DF-24000			
IDW135N	IDWC135DF-12000		IDWC135DF-24000		IDWVSKS03	
IDW175N	IDWC175DF-12000		IDWC175DF-24000			
IDW215N	IDWC215DF-12000		IDWC215DF-24000			
IDW275N	IDWC275DF-12000		IDWC275DF-24000			
IDW365N	IDWC365DF-12000	IDWC365DF-24000				

Series ID Features

- Provides dry air at atmospheric dew point as low as -26.2°F (-32.3°C) Standard pressure dew point -16.2°F (-8.8°C)
- Compact and light weight without heater and electric control board
- Possible to check outlet dew point with an indicator



Accessories

Model	Bracket	Mist Separator	Adsorbent Set for Standard Dew Point	Adsorbent Set for Special Low Dew Point
ID200-N02	6604113	AM150C-N02C-T	ID-200S	ID-200Z
ID300-N04		AM350C-N04C-T	ID-300S	ID-300Z
ID400-N04	660651		AM450C-N06C-T	ID-400S
ID600-N06		ID-600S		ID-600Z

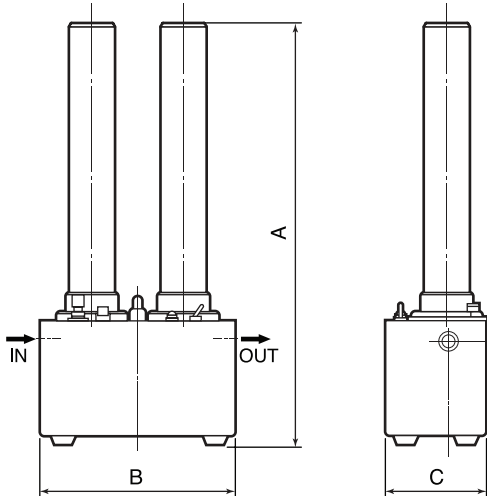
Add Z at the end of model no. for -26°F dew point.



Specifications

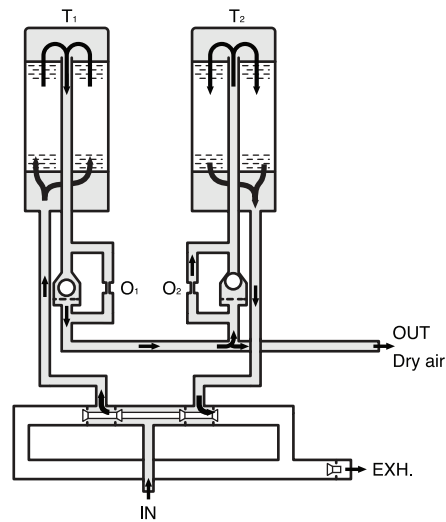
Model	Flow			Port size (NPT)	Power supply	Dimensions			Weight
	Inlet	Outlet	Purge Air			A	B	C	
	SCFM	SCFM	SCFM			inch	inch	inch	
ID200-N02	3.53	2.82	0.71	1/4"	110VAC Single-Phase 60hz	20.5	9.4	4.7	15.4
ID300-N04	6.78	5.47	1.31	1/2"		24.2			18.7
ID400-N04	14.65	11.65	3			3/4"	33.5	12.6	6.7
ID600-N06	34.43	27.54	6.89	37.8			55.1		

Dimensions



To maximize the life of the adsorbent and performance of the unit, a mist separator should be installed prior to the dryer. A particulate filter is recommended downstream to capture possible desiccant fines that arise during normal operation of the dryer.

Operation Principle



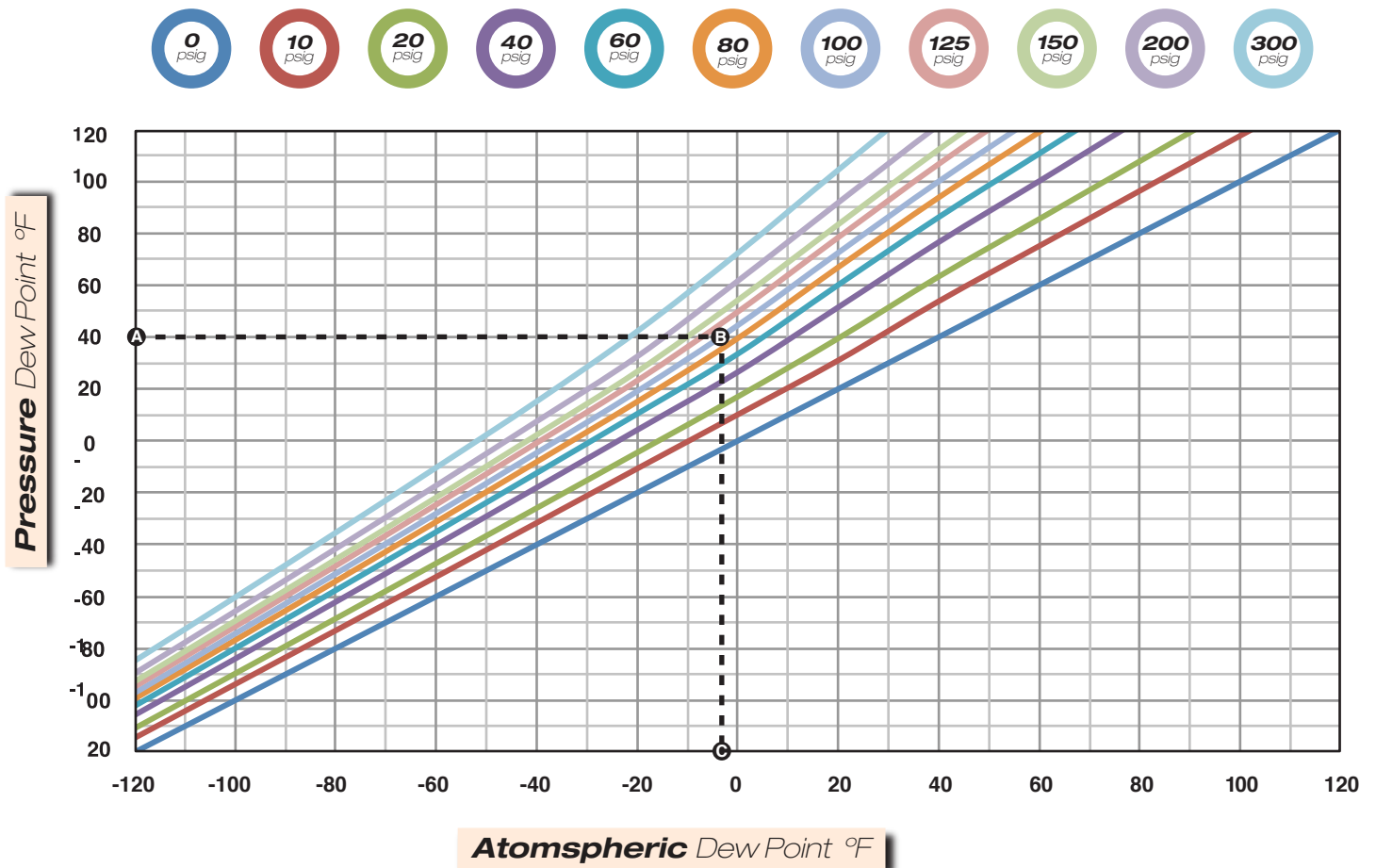
The compressed air that flowed in from the IN side passes through the 4 way solenoid valve, and after it is dehumidified at adsorption cylinder T1, it turns into dry air and exits from the OUT side.

Meanwhile, a portion of the dry air passes through orifice O₂ to reactivate the adsorption agent at adsorption cylinder T₂. This air, carrying moisture, passes through the solenoid valve and is released to the atmosphere.

After an interval of time, the switching valve operates, and T₁ becomes reactivated while T₂ assumes the adsorption state.

This process is repeated to continuously provide dry air.

Dew Point Conversion Chart



How to Use:

To find the equivalent atmospheric dew point from a known pressure dew point, identify the pressure dew point on the vertical axis. Follow the line horizontally to the associated pressure. From the intersection of the temperature and pressure lines, follow this vertically to the horizontal axis where the atmospheric dew point can be read.

Example: For a 40°F pressure dew point (A) at 100 psig (B), the equivalent atmospheric dew point is ~ -3.5°F (C)

Coalescing and Particulate Filters

Water Droplet Removal

Series AMG

Water Separator

Water droplet separation rate: 99%



AMG150
to 550C



AMG650/850

Large Dust Particle Filtration
Oil Droplet Separation

Series AFF

Main Line Filter

Nominal filtration rating: 3 μm
[Filtration efficiency: 99%]



AFF2C
to 22C



AFF37B/75B

Dust Filtration, Oil Coalescing

Series AM

Mist Separator

Nominal filtration rating: 0.3 μm
[Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 0.8 ppm (1.0 mg/m³ [ANR])



AM150C
to 550C



AM650/850

Dust Filtration, Oil Coalescing

Series AMD

Micro Mist Separator

Nominal filtration rating: 0.01 μm
[Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 0.8 ppm
[$\approx 1.0 \text{ mg/m}^3$ (ANR)]



AMD150C
to 550C



AMD650/850

Dust Filtration, Oil Coalescing

Series AMH

Micro Mist Separator with Pre-filter

Built-in 0.3 μm pre-filter
The AM + AMD element have
been integrated to achieve a
space-saving design.
Nominal filtration rating: 0.01 μm
[Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 0.08 ppm [$\approx 1.0 \text{ mg/m}^3$
(ANR)]



AMH150C
to 550C



AMH650/850

Dust Filtration, Oil Mist Adsorption

Series AME

Super Mist Separator

Nominal filtration rating: 0.01
 μm [Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 0.008 ppm [$\approx 0.01 \text{ mg/m}^3$
(ANR)] Cleanliness at outlet:
Not more than 100 particles of
size 0.3 μm or larger/ft³ (35
particles or less/10 ℓ (ANR))



AME150C
to 550C



AME650/850

Carbon Filter

Series AMF

Odor Removal Filter

Nominal filtration rating: 0.01 μm
[Filtration efficiency: 99.9%]
Oil mist density at outlet:
Max. 0.0032 ppm
[$\approx 0.004 \text{ mg/m}^3$ (ANR)]



AMF150C
to 550C



AMF650/850

Specifications

AMG Series Water Separator	AMG Element	AFF Series 3 Micron Rating	AFF Element	AM Series 0.3 Micron Rating	AM Element	Flow Rate (SCFM)	Port Size (NPT)	Max. Working Pressure	Max. Temperature
AMG150C-N02C	AMG-EL150	AFF2C-N02C-T	AFF-EL2B	AM150C-N02C-T	AM-EL150	10	1/4"	145 psi*	140° F
AMG250C-N03C	AMG-EL250	AFF4C-N03C-T	AFF-EL4B	AM250C-N03C-T	AM-EL250	26	3/8"		
AMG350C-N04C	AMG-EL350	AFF8C-N04C-T	AFF-EL8B	AM350C-N04C-T	AM-EL350	53	1/2"		
AMG450C-N06D	AMG-EL450	AFF11C-N06D-T	AFF-EL11B	AM450C-N06D-T	AM-EL450	78	3/4"		
AMG550C-N10D	AMG-EL550	AFF22C-N10D-T	AFF-EL22B	AM550C-N10D-T	AM-EL550	123	1"		
AMG650-N14D	AMG-EL650	AFF37B-N14D-T	AFF-EL37B	AM650-N14D-T	AM-EL650	212	1-1/2"	145 psi	
AMG850-N20D	AMG-EL850	AFF75B-N20D-T	AFF-EL75B	AM850-N20D-T	AM-EL850	424	2"		

AMD Series 0.01 Micron Rating	AMD Element	AMH Series 0.1 Micron Rating	AMH Element	Flow Rate (SCFM)	Port Size (NPT)	Max. Working Pressure	Max. Temperature
AMD150C-N02C-T	AMD-EL150	AMH150C-N02D-T	AMH-EL150	7	1/4"	145 psi*	140° F
AMD250C-N03C-T	AMD-EL250	AMH250C-N03D-T	AMH-EL250	17	3/8"		
AMD350C-N04C-T	AMD-EL350	AMH350C-N04D-T	AMH-EL350	35	1/2"		
AMD450C-N06D-T	AMD-EL450	AMH450C-N06D-T	AMH-EL450	71	3/4"		
AMD550C-N10D-T	AMD-EL550	AMH550C-N10D-T	AMH-EL550	131	1"		
AMD650-N14D-T	AMD-EL650	AMH650-N14D-T	AMH-EL650	212	1-1/2"	145 psi	
AMD850-N20D-T	AMD-EL850	AMH850-N20D-T	AMH-EL850	424	2"		

Filters with - T suffix comes with pop up indicator for element replacement. *Optional 232 psi maximum pressure rating available.

Super Mist Separator

- AME activated carbon filters are high efficiency adsorbing units for removal of oil vapors.
- Color change indicates when the element is saturated.

Activated Carbon Filter

- AMF activated carbon filters are high efficiency adsorbing units for removal hydrocarbon and organic vapors from compressed air.
- Replace filter element every 6 months for optimal performance.

Absorbing filters must not operate in oil or water saturated conditions. For optimal system performance, see system performance, see system table on pgs. 4 & 5 for combinations of filters to achieve desired air quality. At a minimum, AME and AMF filters should be placed after a 0.01µm coalescing filter.

AME Series Super Mist Separator	AME Element	AMF Series Odor Removal Filter	AMF Element	Flow (scfm)	Port Size (NPT)	Max. Working Pressure	Max. Temperature
AME150C-N02	AME-EL150	AMF150C-N02	AMF-EL150	7	1/4"	145 psi*	140°F
AME250C-N03	AME-EL250	AMF250C-N03	AMF-EL250	17	3/8"		
AME350C-N04	AME-EL350	AMF350C-N04	AMF-EL350	35	1/2"		
AME450C-N06	AME-EL450	AMF450C-N06	AMF-EL450	71	3/4"		
AME550C-N10	AME-EL550	AMF550C-N10	AMF-EL550	131	1"		
AME650-N14	AME-EL650	AMF650-N14	AMF-EL650	212	1-1/2"	145 psi	
AME850-N20	AME-EL850	AMF850-N20	AMF-EL850	424	2"		

* Optional 232 psi maximum pressure rating available.
Activated carbon filters will not remove carbon monoxide or carbon dioxide from compressed air.

Correction Factors

Performance Correction Factors

To calculate the capacity of a filter at various pressure multiply its nominal flow by the correction factor.

Operating Pressure (psi)	14.5	29	44	58	72	87	101	116	130	145	174
Correction Factor	0.25	0.38	0.50	0.63	0.75	0.88	1	1.12	1.25	1.4	1.6

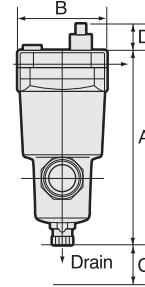
Example: AMD550C at 100 psi Flow = 131 scfm at 58 psi multiply 131 x .63 = 82.5 scfm (corrected capacity)
Flow ratings shown for all filters are at 100 psi, please utilize correction factors for other operating pressures.

Dimensions

Aluminum Body - Threaded Ports AFF, AMG, AM, AMD, AMH

Filter Models		Dimensions (inch)			Weight (Lb)	Port Size (NPT)	Bowl Capacity (oz)	
		A	B	C				
2C	150C	6.3	2.5	0.4	1.5	0.84	1/4"	8.5
4C	250C	6.81	3.0			1.21	3/8"	10.1
8C	350C	8.0	3.5			1.98	1/2"	20.3
11C	450C	8.9	4.2			3.10	3/4"	33.8
22C	550C	10.2	4.8	0.6	4.6	1"	50.7	
37B	650	12.2	6.3	0.4	1.5	9.2	1-1/2"	101.4
75B	850	18.2	8.7			23.1	2"	304.3

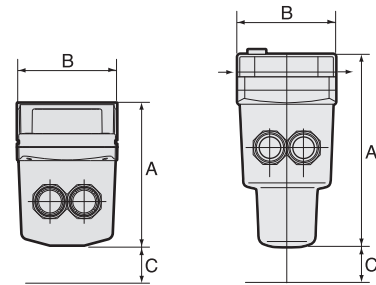
Dimensions



**AFF2C TO 75B, AMG150C TO 850
AM150C TO 850C, AMD150C TO 850C
AMH150C TO 850C**

Aluminum Body - Threaded Ports AME, AMF

Filter Models		Dimensions (inch)			Weight (Lb)	Port Size (NPT)	
		A	B	C			
150C		3.3	2.5	0.4	1.5	0.66	1/4"
250C		4.1	3.0			1.06	3/8"
350C		5.2	3.5			1.76	1/2"
450C		5.6	4.2			2.87	3/4"
550C		7.4	4.8	0.6	4.41	1"	
650		11.5	6.3	0.4	1.5	9.26	1-1/2"
850		15.9	8.7			23.15	2"



**AME150C to 550C
AMF150 TO 550**

**AME650 to 850
AMF650 to 850**

Accessories

Mounting Bracket	Applicable Models
AM-BM101	AFF2C, AM150C, AMD150C, AME150C, AMF150C, AMH150C, AMG150C
AM-BM102	AFF4C, AM250C, AMD250C, AME250C, AMF250C, AMH250C, AMG250C
AM-BM103	AFF8C, AM350C, AMD350C, AME350C, AMF350C, AMH350C, AMG350C
AM-BM104	AFF11C, AM450C, AMD450C, AME450C, AMF450C, AMH450C, AMG450C
AM-BM105	AFF22C, AM550C, AMD550C, AMH550C, AMF550C, AMH550C, AMG550C
BM56	AFF37B, AM650, AMD650, AME650, AMF650, AMH650, AMG650
BM57	AFF75B, AM850, AMD850, AME850, AMF850, AMH850, AMG850

Replacement Parts

Bowl Assembly Model	Applicable Models
AM-CA150C-□□-□	AFF2C, AM150C, AMD150C, AMH150C, AMG150C
AM-CA250C-□□-□	AFF4C, AM250C, AMD250C, AMH250C, AMG250C
AM-CA350C-□□-□	AFF8C, AM350C, AMD350C, AMH350C, AMG350C
AM-CA450C-□□-□	AFF11C, AM450C, AMD450C, AMH550C, AMG550C
AM-CA550C-□□-□	AFF22C, AM550C, AMD550C, AMH550C, AMG550C
AM-CA650-□□	AFF37B, AM650, AMD650, AMH650, AMG650
AM-CA850-□□	AFF75B, AM850, AMD850, AMH850, AMG850
AME-CA150C-A-□	AME150C, AMF150C
AME-CA250C-A-□	AME250C, AMF250C
AME-CA350C-A-□	AME350C, AMF350C
AME-CA450C-A-□	AME450C, AMF450C
AME-CA550C-A-□	AME550C, AMF550C
AME-CA650-A □	AME650, AMF650
AME-CA850-A □	AME850, AMF850

Most part numbers provided for reference only. □ designates various configuration options, please consult AFF/AM* catalog for details.

Modular Spacer Compatibility

Filter	Spacer	FRL	AV Soft Start Valve	IDG Membrane Dryer
AFF2C, AM□150C	Y200-A	AC20	AV2000	IDG3(H), IDG5(H)
AFF4C, AM□250C	Y300-A	AC25, AC30	AV3000	IDG10(H), IDG20(H)
AFF8C, AM□350C	Y400-A	AC40	AV4000	IDG30~ IDG100*
AFF11C, AM□450C	Y500-A	AC40-06	-	-
AFF22C, AM□550C	Y600-A	AC50, AC55, AC60	AV5000	-

Spacers with T brackets (ex. Y300 T-A) cannot be used due to interference. To mount modularly connected AFF/AM* components, use one or more AM-BM* brackets.

Common Optional Specifications

F *Option Symbol*

FKM Rubber Material	AFF2C~22C AM150C~550C AMD150C~550C AMH150C~550C AME150C~550C AMF150C~550C AMG150C~550C
---------------------	--

O-ring and gasket material are changed from NBR to FKM for chemical compatibility

T *Option Symbol*

With Element Service Indicator	AFF2C~75B AM150C~850 AMD150C~850 AMH150C~850
--------------------------------	---

Visual indication of differential pressure, facilitates element change prior to the recommended 15 psi (0.1 MPa).

H *Option Symbol*

Medium Air Pressure Rating 232 psi/1.6 MPa	AFF2C~22C AM150C~550C AMD150C~550C AMH150C~550C AME150C~550C AMF150C~550C AMG150C~550C
---	--

Max. operating pressure is increased from 145 psi (1 MPa) to 232 psi (1.6 MPa). Auto drain options are limited. For larger sizes (AFF37/75B, AM□650/850), please see AFW series when higher pressure is required

V *Option Symbol*

Degrease Wash/White Vaseline	AFF2C~22C AM150C~550C AMD150C~550C AMH150C~550C AME150C~550C AMF150C~550C AMG150C~550C
------------------------------	--

Body/housing is degreasing washed. The lubrication grease for O-ring and gasket is changed to white vaseline.

Made to Order Specifications

X6 *Option Code*

With Differential Pressure Gauge	AFF2C~75B AM150C~850 AMD150C~850 AMH150C~850
----------------------------------	---

A differential pressure gauge (GD40-2-01) is installed on the filter to track filter life. This simplifies customer piping and provides a compact design.

X26 *Option Code*

N.C., N.O. Auto drain with threaded drain guide	AFF2C~37B AM150C~650 AMD150C~650 AMH150C~650 AMG150C~650
---	--

The external auto drain valve connection is changed from a One-touch fitting to a 1/4" female thread. N.C. type is not available on AFF37B and AM□650.

X37 *Option Code*

With Differential Pressure Switch (with Indicator)	AFF37B~75B AM650~850 AMD650~850 AMH650~850
--	---

Allows visual confirmation of differential pressure which indicates the element life. The built in contact enables remote signaling.

X12 *Option Code*

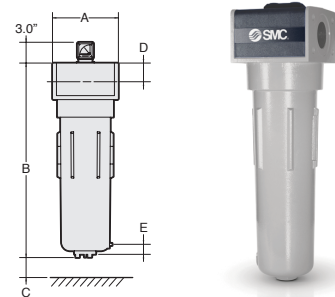
White Vaseline Specifications	AFF37B~75B AM650~850 AMD650~850 AMH650~850 AME650~850 AMF650~850 AMG650~850
-------------------------------	---

Changes the grease for O-rings and gaskets to white vaseline.

Threaded Compressed Air Filters - Series AFW

Features

- Flow rates up to 1,500 SCFM, connections to 3" NPT
- Suitable for use with mineral and synthetic oils as well as oil free
- Differential pressure indicators and float type auto drains standard



Specifications

Filter 1)	Element 1)	Flow Rate (SCFM)	NPT Connections 1/8"m			Max. Working Pressure	Max. Temperature	Dimensions Inch					Weight (Lbs)			
			In/out	Bottom	Side			A	B	C	D	E				
AFW150-N10DG-E * 2)	EL-AFW150-E*	150	1"	1/4"	1/8"	230 psi	250° F	4 1/2"	14"	6"	1 1/2"	1 1/4"	5.5			
AFW225-N14DG-E * 2)	EL-AFW225-E*	225	1-1/2"	1/4"	230 psi			250° F	5-3/4"	19"	6-1/2"	2"	1-1/2"	12.0		
AFW300-N14DG-E * 2)	EL-AFW300-E*	300														
AFW450-N20DG-E*	EL-AFW450-E*	450	2"						1/2"	26-3/4"	27-1/2"	7"			2-1/2"	33.5
AFW650-N20DG-E*	EL-AFW650-E*	650														
AFW1000-N30DG-E*	EL-AFW1000-E*	1,000	3"	1/2"					32-1/2"	38-1/2"	32					
AFW1250-N30DG-E*	EL-AFW1250-E*	1,250														
AFW1500-N30DG-E*	EL-AFW1500-E*	1,500														

1) Specify filtration grade in part number by replacing *. 5 = 5µm, 1 = 1µm, A = 0.01µm, C = activated carbon
 2) If 145 psi pressure rating is acceptable, the equivalent AFF / AM* model is preferred.

Element Specifications

Filtration Grade	E5	E1	EA	EC
Description	General Purpose	Prefiltration / Coalescing	High Efficiency Coalescing	Activated Carbon
Particle Removal µm	5	1	0.01	0.01
Max. Particle size class 4)	3	2	1	1
Max. Oil Content Class 4)	4	2	1	1
Max. Oil Carryover 68°F (20°C), ppm	5	0.1	0.01	0.003
Recommended Temperature, °F	100			77
Max. Temperature, °F	250			
Max. Working Pressure, psig	300 (element only, see housing rating)			
Pressure Loss - Clean & Dry, psid	0.5	1	1.5	1.1
Pressure Loss - Oil Saturated, psid	1	2	3	N/A
Pressure Loss - Change Element, psid	6			
Element Media	Borosilicate Microfiber Multi-Wrap			Carbon Impregnated Paper

4) Per ISO 8573-1

Accessories - Filters

Description	Outlet Port Size (NPT)	Applicable Body Size		
		AFW150	AFW225-650	AFW1000-1500
Connection Kit		AFW-CK150	AFW-CK650	AFW-CK1500
Mounting Bracket Kit (2 per kit)		AFW-BK150	AFW-BK650	AFW-BK1500
Port Plate Kits 3)	1/2"	AFW-E150-N04	N/A	N/A
	3/4"	AFW-E150-N06		
	1"	AFW-E150-N10		
	1-1/2"	AFW-E150-N14	AFW-E650-N14	
	2"	N/A	AFW-E650-N20	

3) Port plate kits packaged each, 2 port plate kits required to convert both sides of the housing

Replacement Parts - Filters

Description	Part Number	Comments
Float Type Auto Drain	AFW-ADVW16	Replacement for Plastic Drain Valves AFW150-1500, 2016 and older
	AFW-DVAS16	Replacement for Metal Drain Valves AFW150-1500, 2016 and newer
Differential Pressure Indicator	AFW-DP-GAUGE	-
Differential Pressure Remote Alarm	AFW-DP-REMOTE	-

Correction Factor

For maximum flow rate, multiply model flow rate shown in the specification table by the correction factor shown below corresponding to the working pressure. This applies to all filtration grades as well as the water separator models.

Example: AFW650-N20-E1

Rated flow = 650 SCFM, working pressure = 115 psi
Correction factor = 1.07 → max flow = 650 x 1.07 = 696 SCFM

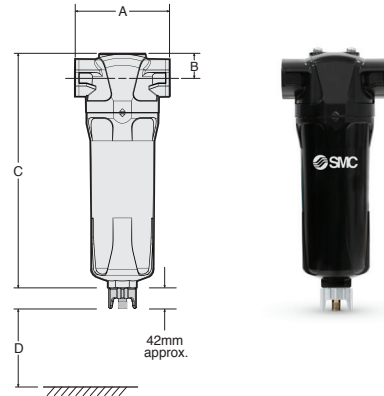
Operating Pressure (psi)	4	9	14.5	29	44	58	72	87	100	115	130	145	160	174	189	203	218	232
Correction Factor	0.21	0.29	0.38	0.53	0.65	0.76	0.84	0.92	1.00	1.07	1.13	1.19	1.25	1.31	1.36	1.41	1.46	1.51

Centrifugal Water Separators - Series AFW-WS

Features

- Flow rates up to 1,500 SCFM
- Threaded connections to 3" NPT
- Suitable for use with mineral and synthetic oils as well as oil free
- Float type auto drains standard up to 1500 SCFM
- Float and drain can be changed from outside bowl

Max. recommended operating temperature	248°F (176°F w/float drain)
Min. recommended operating temperature	35°F
Typical pressure loss at rated flow	0.7 psi
Max. working pressure	232 psig (300 psig w/manual drain)



Specifications - Centrifugal Water Separators (Threaded)

Model Number	Flow Rate SCFM	Dimensions (in)				Connections		Weight Lbs
		A	B	C	D	In/Out	Bottom*	
AFW175A-N10D-WS	175	5.0	1.3	11.2	3.1	1" NPT	3/4" G (w/o auto drain)	3.75
AFW275A-N12D-WS	280					1-1/4" NPT		
AFW400A-N14D-WS	400	6.7	2.1	20.0	3.9	1-1/2" NPT	1/8" NPT (female connections on auto drain)	10.80
AFW700A-N20D-WS	700					2" NPT		
AFW850A-N25D-WS	850	8.7	2.8	16.5	3.9	2-1/2" NPT	17.64	
AFW1500A-N30D-WS	1500					3" NPT		

*Bottom drain, with mechanical float drain.

Accessories - Water Separators

Description	Applicable Body Size			Applicable Body Size (Old Style)			
	AFW175	AFW400~700A	AFW850A~1500A	AFW175	AFW275~325	AFW400~700	AFW850~1500
Wall Mounting Bracket Kit	AFW-MBK175A	AFW-MBK700A	AFW-MBK1500A	AFW-MBK175	AFW-MBK325	AFW-MBK700	AFW-MBK1500
Connecting kit, 2 housings	AFW-CK175-2A	AFW-CK700-2A	AFW-CK1500-2A				
Connecting kit, 3 housings	AFW-CK175-3A	AFW-CK700-3A	AFW-CK1500-3A				
Connecting kit, 4 housings	AFW-CK175-4A	AFW-CK700-4A	AFW-CK1500-4A				

Replacement Parts - Water Separators

Description	Part Number	Comments
Float Type Auto Drain, N.O.	AFW-ADVS16	Optional type for AFW175A~1500A-WS
	AFW-ADVSE16	Externally accessible type, standard for AFW175A~1500A-WS
Manually operated drain valve	AFW-MDV25	Optional type for AFW175A~1500A-WS
	AFW-MDVE25	Externally accessible type, for AFW175A~1500A-WS, 300 psi
Float Type Auto Drain, N.O.	AFW-DVAS16	Replacement for metal drain valves, AFW175~1500-WS (old style)
Spinner	AFW-CM-059-108	Replacement for AFW175-WS, AFW175A-WS
	AFW-CM-128-159	Replacement for AFW275~325-WS, AFW275A-WS
	AFW-CM-159-208	Replacement for AFW400~700-WS, AFW400A~700A-WS
	AFW-CM-254-340	Replacement for AFW850~1500-WS, AFW850A~1500A-WS

Consult Factory for Higher Flow Flanged Filter or Water Separator Units

Related Products



Heavy Duty Auto Drain Series ADH

- Easy maintenance. Possible to maintain easily without removing piping.
- No need for electric power and no waste of air. Float style drain allows automatic draining without electric power



Modular Type F.R.L. Unit Series AC-A, AC-B

- Better visibility and safer. The bowl is covered with a transparent bowl guard.
- Easy replacement of the element. The element and bowl are in one piece (AF20-40-A, AW20-40-A)
- Reduced required maintenance space: up to 46% reduction
- Individual components available

Filter: AF-A

Lubricator: AL-A

Regulator: AR-A, AR-B

Mist Separator: AFM-A

Filter Regulator: AW-A, AW-B

- Attachment

Spacer: Y100-A, Y200-A, Y300-A, Y400-A, Y500-A, Y600-A

Spacer with Bracket: Y100T-A, Y200T-A, Y300T-A, Y400T-A, Y500T-A, Y600T-A



Electro-Pneumatic Regulator Series ITV

- Step-less control of air pressure in proportion to electric signals.
- Sensitivity: 0.029 psi (0.2 kPa) [14.5 psi (100 kPa) specification]
- Linearity: $\pm 1\%$ or less (F.S.)
- Hysteresis: 0.5% or less (F.S.)
- Communication: CC-Link, DeviceNet™, PROFIBUS DP, RS-232C



2-Color Display High-Precision Digital Pressure Switch Series ZSE40A(F)/ISE40A

- Applicable fluid: Air, non-corrosive gas, non-flammable gas
- Simultaneous copying is possible for maximum 10 units.
- 3-step setting
- With One-touch fitting
- IP65



Digital Flow Switch Series PF2A

- Integrated type and separate monitor type are available.
- Switch output, accumulated pulse output, analog output
- Capable of switching back and forth between cumulative and instantaneous flow
- IP65

Digital Pneumatic Products Builder

Engineering/Innovation

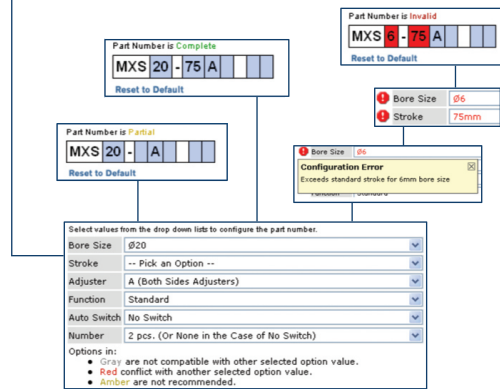
Create, View & Download 2D & 3D Models Online
Update in Real-Time
Design & Save Parts into a Custom Parts List.



Point Your Browser to:

www.smcusa.com/cad/

Validate Your Part Number



- View and Download 2D & 3D CAD Models.
- Files Available in Multiple Formats. Including Solidworks, Catia, and others. compatible with Virtually any CAD System.
- CAD Model will match the Specified Part you have Designed and Validated.
- CAD File can be Saved for Future Reference or Placed Directly into your Project Design.

SMC North American Headquarters, Manufacturing and Central Distribution Facility

Global Products / Local Support

The North American Manufacturing and Central Warehouse expansion has positioned SMC to support sales and growth in the U.S. and Canada.

- 560,00 sq. ft. total manufacturing space and 571,000 sq. ft. of warehouse space
- Additional investment in warehouse space to increase inventory levels
- Incorporating FTZ are within the expanded warehouse reducing overseas delivery time



Global Manufacturing, Distribution and Service Network

Worldwide Subsidiaries

EUROPE

AUSTRIA
SMC Pneumatik GmbH (Austria)

BELGIUM
SMC Pneumatics N.V./S.A.

BULGARIA
SMC Industrial Automation Bulgaria EOOD

CROATIA
SMC Industrijska Automatika d.o.o.

CZECH REPUBLIC
SMC Industrial Automation CZ s.r.o.

DENMARK
SMC Pneumatik A/S

ESTONIA
SMC Pneumatics Estonia

FINLAND
SMC Pneumatics Finland OY

FRANCE
SMC Pneumatique S.A.

GERMANY
SMC Pneumatik GmbH

GREECE
SMC Hellas EPE

HUNGARY
SMC Hungary Ipari Automatizálási Kft.

IRELAND
SMC Pneumatics (Ireland) Ltd.

ITALY
SMC Italia S.p.A.

KAZAKHSTAN
LLP "SMC Kazakhstan"

LATVIA
SMC Pneumatics Latvia SIA

LITHUANIA
UAB "SMC Pneumatics"

NETHERLANDS
SMC Pneumatics B.V.

NORWAY
SMC Pneumatics Norway AS

POLAND
SMC Industrial Automation Polska Sp. z o.o.

ROMANIA
SMC Romania S.r.l.

RUSSIA
SMC Pneumatik LLC.

SLOVAKIA
SMC Priemyselná Automatizácia, Spol s.r.o.

SLOVENIA
SMC Industrijska Avtomatika d.o.o.

SPAIN / PORTUGAL
SMC España, S.A.

SWEDEN
SMC Pneumatics Sweden AB

SWITZERLAND
SMC Pneumatik AG

TURKEY
SMC Pnömatik Sanayi Ticaret ve Servis A.Ş.

UK
SMC Pneumatics (U.K.) Ltd.

ASIA / OCEANIA

AUSTRALIA
SMC Pneumatics (Australia) Pty. Ltd.

CHINA
SMC (China) Co., Ltd.
SMC Pneumatics (Guangzhou) Ltd.

HONG KONG
SMC Pneumatics (Hong kong) Ltd.

INDIA
SMC Pneumatics (India) Pvt. Ltd.

INDONESIA
PT. SMC Pneumatics Indonesia

JAPAN
SMC Corporation

MALAYSIA
SMC Pneumatics (S.E.A.) Sdn. Bhd.

NEW ZEALAND
SMC Pneumatics (N.Z.) Ltd.

PHILIPPINES
Shoketsu SMC Corporation

SINGAPORE
SMC Pneumatics (S.E.A.) Pte. Ltd.

SOUTH KOREA
SMC Pneumatics Korea Co., Ltd.

TAIWAN
SMC Pneumatics (Taiwan) Co., Ltd.

THAILAND
SMC (Thailand) Ltd.

UNITED ARAB EMIRATES
SMC Pneumatics Middle East FZE

VIETNAM
SMC Pneumatics (VN) Co., Ltd

AFRICA

SOUTH AFRICA
SMC Pneumatics (South Africa) Pty Ltd

NORTH, CENTRAL & SOUTH AMERICA

ARGENTINA
SMC Argentina S.A.

BOLIVIA
SMC Pneumatics Bolivia S.R.L.

BRAZIL
SMC Pneumáticos do Brasil Ltda.

CANADA
SMC Pneumatics (Canada) Ltd.

CHILE
SMC Pneumatics (Chile) S.A.

COLOMBIA
SMC Colombia Sucursal de SMC Chile, S.A.

MEXICO
SMC Corporation (Mexico) S.A. de C.V.

PERU
SMC Corporation Peru S.A.C.

USA
SMC Corporation of America

VENEZUELA
SMC Neumatica Venezuela S.A.

U.S. & Canadian Sales Offices

WEST

Austin
Dallas
Los Angeles
Phoenix
Portland
San Jose

EAST

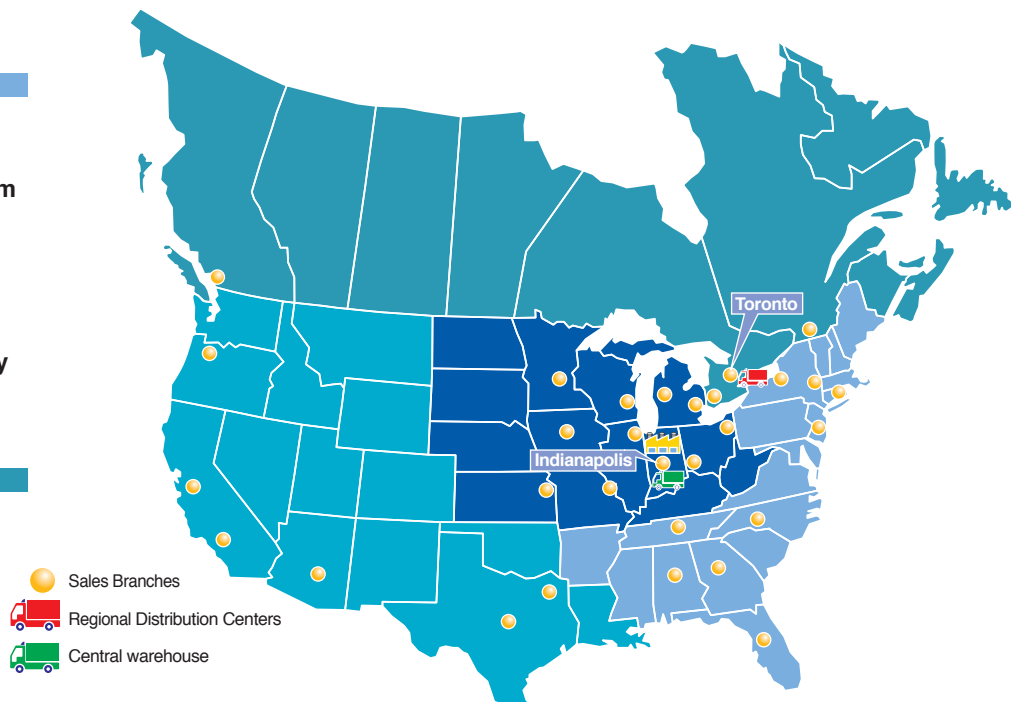
Albany
Atlanta
Birmingham
Boston
Charlotte
Knoxville
Nashville
New Jersey
Rochester
Tampa

CENTRAL

Chicago
Cincinnati
Cleveland
Detroit
Des Moines
Grand Rapids
Indianapolis
Kansas City
Milwaukee
Minneapolis
St. Louis

CANADA

Vancouver
Toronto
Windsor
Montreal



- Sales Branches
- Regional Distribution Centers
- Central warehouse

SMC Corporation of America
10100 SMC Blvd., Noblesville, IN 46060
www.smcusa.com

SMC Pneumatics (Canada) Ltd.
www.smc PneUMATICS.ca

(800) SMC.SMC1 (762-7621)
e-mail: sales@smcusa.com
International inquiries: www.smcworld.com

