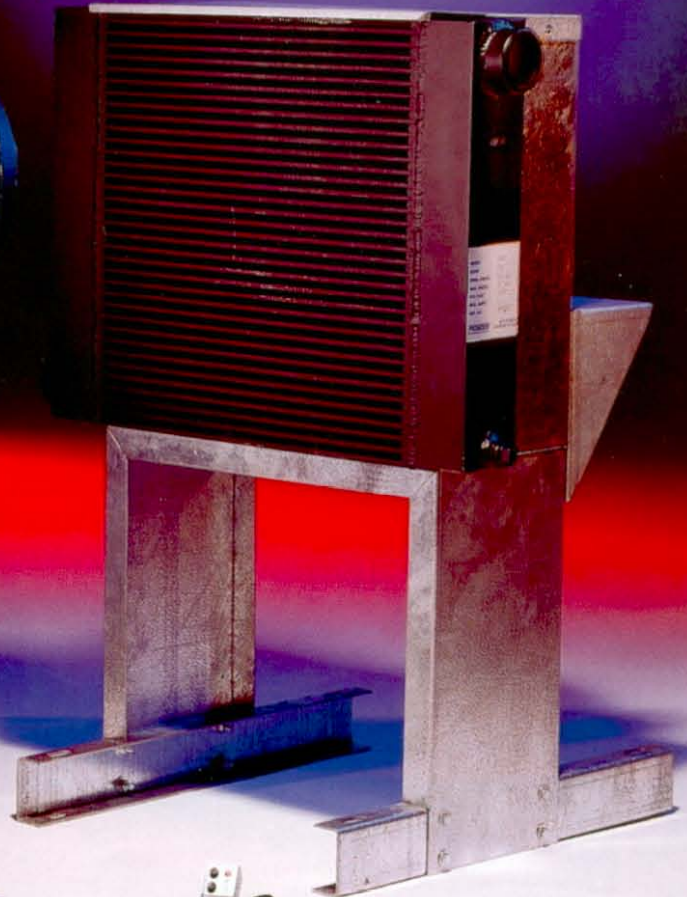


PIONEER



HI-EFFICIENCY

- ◆ AFTER COOLERS
- ◆ SEPARATORS
Introducing Chilled Separators
- ◆ DRAINS
- ◆ CUSTOM PACKAGED SYSTEMS



Pioneer Air Systems, Inc.

1-800-264-1AIR(1247) ♦ www.pioneerair.com ♦ sales@pioneerair.com

Tel/Fax (423) 346-6693/3865 ♦ 210 Flatfork Road ♦ Wartburg, Tennessee 37887, USA

AIR COOLED AFTER COOLERS ECONOMY SERIES

Economy & Compact Series

- Higher pressure and temperature ratings—
‘CH’ Series: 250 PSIG@400°F;
‘AH’/ ‘AV’ Series: 200 PSIG@200°F or 160 PSIG@250°F
- Energy efficient
- High heat transfer efficiency
- Low pressure drop—1-2 PSIG
- Heat Exchangers : AH/AV Series
Copper tubes, aluminum fins
CH Series - All Aluminum
- All weather construction
- Discharged air can be used for space heating
- Direct drive
- Low RPM fans minimize noise level
- Meets OSHA standards
- ODP Motors- standard in AH/AV Series
- TEFC Motors - standard in ‘CH’ Series

Options

- Air motor driven after coolers—Complete with air motor, filter, lubricator, regulator and pressure gage for portable applications
- Conversion kit—Horizontal air discharge to vertical or vertical to horizontal
- Nonstandard voltage
- Heresite coating
- NEMA 7 motor
- Low ambient package—fan cycling and heat tracing on separator, drain and drain line
- Custom systems— trailer or skid mount
- Separators/Extractors/Drains

Correction Factors

Approach Temp.	10°F	15°F	20°F
Correction Factor	0.8	0.9	1.0

EXAMPLE: Capacity of Model AH200 at 125 PSIG and 15°F approach temp. = 0.9 x 200=180 SCFM

Typical Heat Rejection

	INLET AIR TEMPERATURE			
	200°F	250°F	300°F	350°F
BTUH/SCFM	147	203	255	310

Table 1

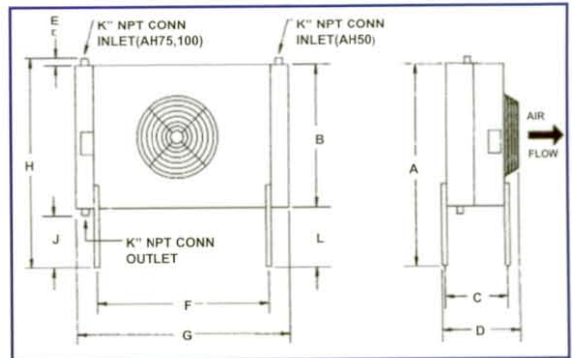


Figure 1. AH75 through AH800 (horizontal discharge)

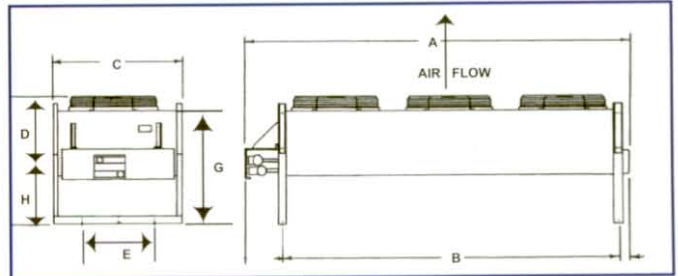


Figure 2. AV1300 through AV4000 (vertical discharge)

Economy Series Air Cooled After coolers - Specifications and Dimensions

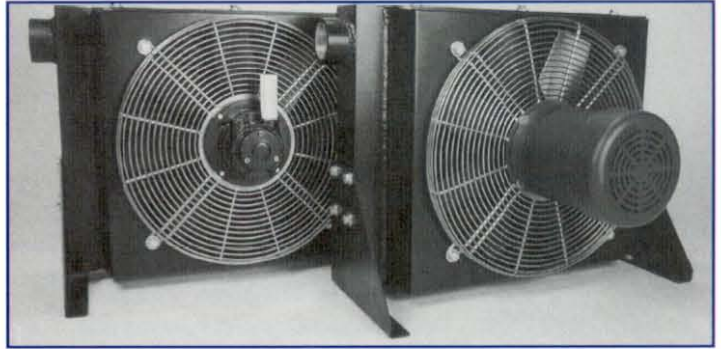
MODEL NUMBER	SHIPPING WT. (LBS.)	MOTOR H.P.	STANDARD VOLTAGE	*NOMINAL SFCM	APPROX. DIMENSIONS (INCHES)									
					A	B	C	D	E	F	G	H	J	K
AH75	90	1/6	115-1-60	75	33	17	26	22	14	2	-	-	15	1
AH150	120	1/6	115-1-60	150	33	17	33	27	14	3	-	-	12	1 1/2
AH300	140	1/6	115-1-60	300	39	17	33	27	14	3	-	-	15	2
AH600	260	1/6	115-1-60	600	23	17	68	62	14	3	-	-	15	2
AH800	300	1/6	115-1-60	800	23	17	69	62	16	4	-	-	15	2 1/2
AV1300	900	1	230/460-3-60	1300	90	80	43	25	34	-	-	16	25	3
AV2000	1050	1	230/460-3-60	2000	121	108	46	-	39	-	50	-	-	3
AV3000	1250	1	230/460-3-60	3000	121	108	46	-	39	-	50	-	-	4
AV4000	1600	1	230/460-3-60	4000	121	108	88	-	81	-	50	-	-	4

Table 2

*For Screw compressors; for reciprocating compressor reduce capacity by 25%

Nonstandard equipment is our specialty

AIR COOLED AFTER COOLERS ...COMPACT DESIGN



Above. CHC180 through CHC5000 (horizontal discharge)

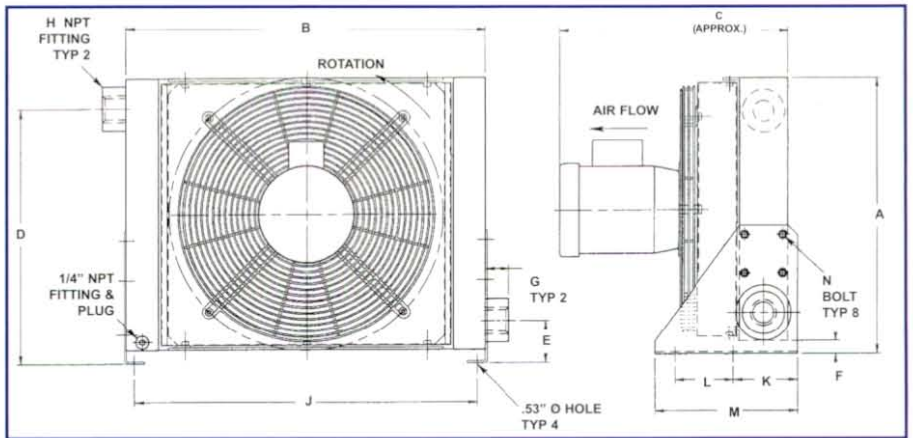


Figure 3. CHC180 through CHC5000

Compact Series Air Cooled After coolers - Specifications & Dimensions

MODEL NUMBER	SHIPPING WT. (LBS.)	MOTOR HP.	STANDARD VOLTAGE	*NOMINAL SCFM	APPROX. DIMENSIONS (INCHES)											
					A	B	C	D	E	F	G	H	J	K	L	M
					(NPT)											
CHC180	40	1/3	115/230	180	12	16	15	11	3	3/4	1	1	15	4	4	8
CHC350	60	1/2	115/230	350	16	19	16	15	3	3/4	2	2	19	4	4	8
CHC800	137	1/2	115/230	800	21	26	18	19	3	1	2	2	25	5	5	11
CHC1000	163	1	115/230	1000	23	30	19	21	3	1	2	2	29	5	5	11
CHC1800	240	2	115/230	1800	28	37	23	25	4	2	2	3	38	6	8	16
CHC2500	350	5	230/460	2500	36	41	25	31	4	2	2	3	38	6	8	16
CHC3500	380	7 1/2	230/460	3500	37	43	30	31	11	2	2	4	44	5	8	15
CHC5000	505	7 1/2	230/460	5000	44	49	30	34	12	2	2	4	49	5	8	15

Table 3

*For Screw compressors; for reciprocating compressor reduce capacity by 25%

KOOL-FLO CLEANABLE WATER COOLED AFTER COOLERS

After Cooler utilize longer lengths of larger diameter heavy wall copper tubing for better performance and greater reliability.

Kool- Flo

1. 10–15°F approach
2. Unitized, all-weld construction
3. Shell, tubes and baffles are of copper/brass construction for longevity
4. Heavy wall tubes, no extended surfaces to collect oil residue, dust and dirt. Tube sizes are: 3/8" OD x 0.025" wall (KF 50–800); 1/2" OD x 0.028" wall (KF 1000–3000)
5. Low water usage—1.0 to 1.5 GPM per 100 SCFM
6. Water side pressure drop 5–8 PSIG
7. Air side pressure drop 1–2 PSIG
8. Full port opening allows for easy tube cleaning
9. MWP, air & water side- 150 PSIG

Options

1. Higher pressure after coolers and heat exchangers
2. Stainless Steel or Cupro Nickel after coolers
3. Separators/Extractors
4. Automatic Drains

ALL COPPER & BRASS CONSTRUCTION
Shell, tubes, baffles, end plates and fittings are made of copper/brass for longevity

COUNTER-FLOW DESIGN...
for maximum heat transfer efficiency

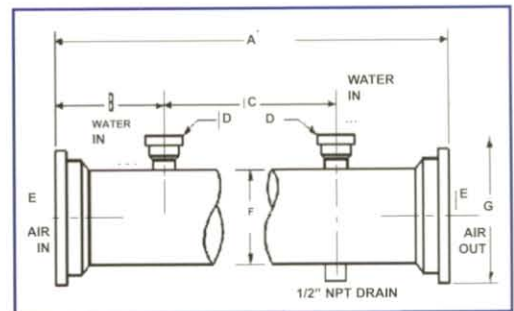


Figure 4. Kool-Flo

Water Cooled After coolers - Specifications & Dimensions

(larger sizes available)

MODEL	*NOMINAL SCFM	SURFACE AREA (SQ. FT)	A IN.	B IN.	C IN.	WATER IN/OUT D ² IN.	AIR IN/OUT E ² IN.	F IN.	G IN.	SHIP WT. LBS.
K50	50	2.3	26	3	20	1/2NPT	2NPT	3	4	20
KF100	100	4.6	49	3	43	1/2NPT	2NPT	3	4	25
KF150	150	6.9	72	3	66	1/2NPT	2NPT	3	4	30
KF200	200	9.2	52	4	44	1NPT	3NPT	4	4	40
KF250	250	11.5	64	4	56	1NPT	3NPT	4	4	50
KF300	300	13.8	76	4	68	1NPT	3NPT	4	4	60
KF400	400	18.1	100	4	92	1NPT	3NPT	4	4	80
KF500	500	23.0	63	7	49	1 1/2NPT	4FLG	5	9	100
KF650	650	29.9	82	7	68	1 1/2NPT	4FLG	5	9	130
KF800	800	36.8	100	7	86	1 1/2NPT	4FLG	5	9	160
KF1000	1000	46.0	70	7	56	2NPT	6FLG	6	11	250
KF1250	1250	57.5	87	7	73	2NPT	6FLG	6	11	400
KF1600	1600	73.6	111	7	97	2NPT	6FLG	6	11	600
KF2000	2000	92.0	138	7	124	2NPT	6FLG	6	11	800
KF2500	2500	115.0	171	7	157	2NPT	6FLG	6	11	1000
KF3000	3000	138.0	209	7	195	2 1/2NPT	6FLG	6	11	1250

NOTES: ¹ Based on 15° approach and 100–150 PSIG working pressure. For 10°F approach, multiply capacity by 0.7
² 'D' & 'E' other than standard available

Table 4

*For Screw compressors; for reciprocating compressor reduce capacity by 25%



Above : Water Cooled After cooler

SEPARATORS & DRAINS

The **Centri-Flo Separator** incorporates four methods of moisture separation for maximum efficiency. The cyclone, centrifuge, baffles and boundary-layer control features offer many advantages to moisture separation. Tests show **Pioneer** separators to be more efficient and more reliable over a wider flow range than competitive models.

How It Works

Compressed air, gas or steam enters the separator at a high velocity. The specially designed centrifuge element provides the primary separation. The bell reducer also forces compressed air to rub and impact against baffles to further improve the separation efficiency. These baffles are strategically located and placed at a specific angle for optimum separation. The specially designed convex drain plate prevents accumulation of condensate at the compressed air re-entry point into the bell reducer. The large opening of the bell reducer keeps air velocity low thus preventing moisture re-entrainment.

Together the four-step moisture separation and the prevention of moisture re-entrainment provide the maximum moisture separation efficiency.

Separators & Drains

1. **High efficiency up to 99.9%** at varying flows
2. **Rugged construction**
3. **Coated inside** for rust prevention
4. **Separate condensate chamber**

Options

1. **Higher pressure rating** up to 5000 PSIG
2. **Special materials/coatings**
3. **Flanges and nonstandard IN/OUT**
4. **Automatic Drains**—Internal Automatic Float Drain available for PCS75 only
For External Automatic Drains, see page 7
5. **Sight Glass**
6. **Auxiliary sight glass port**—for visibility from front and back, except model PCS75
7. **Floor Mount**
8. **Wall Mount**



Above: Separators

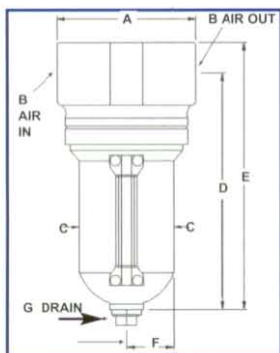


Figure 5. PCS75

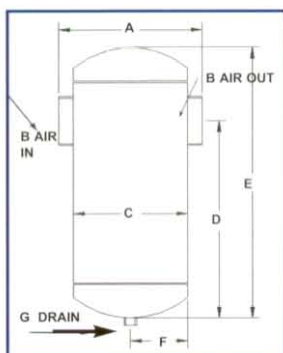


Figure 6. PCS200-PCS1200

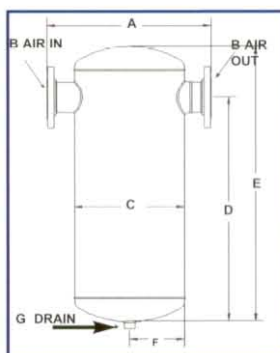


Figure 7. PCS2400 and Larger

NEW!!! Chilled Separators

The separator housing is kept cold by flowing cold water solution through the cooling jacket. To cool air/gas, the chilled water temperature shall be below the inlet air/gas temperature. The cooling jacket prevents a rise in temperature of the air/gas in the separator, and provide additional cooling, thereby improving moisture condensation and separation, resulting in better dew point. In some **PIONEER** Refrigerant Dryers, Chilled Separators use refrigeration to provide enhanced performance. Chilled separator are available from sizes PCS200C & Up.

Separators-Specifications & Dimensions

*MODEL	CAPACITY SCFM@ 100 PSIG	APPROX. DIMENSIONS IN INCHES							MAX. PRES. PSIG	SHPG. WT. LBS.
		A	B	C	D	E	F	G		
PCS75	75	4	3/4 NPT	3	7	7	2	1/8 NPT	250	5
PCS200	200	6	1 NPT	4	7	12	2	1/8 NPT	250	20
PCS300	300	6	1 1/2 NPT	4	8	13	2	1/8 NPT	250	35
PCS600	600	7 1/2	2 NPT	6	12	15	3	1/4 NPT	250	60
PCS1200	1200	10	3 NPT	8	14	17	4	3/8 NPT	150	100
PCS2400	2400	20	4 FLG	12	24	30	6	1/2 NPT	150	150
PCS4500	4500	24	6 FLG	16	30	41	8	1 NPT	150	205
PCS7500	7500	28	8 FLG	18	32	41	9	1 NPT	150	360
PCS10000	10000	28	8 FLG	18	37	50	9	1 NPT	150	495
PCS15000	15000	33	10 FLG	24	55	70	12	1 NPT	150	800
PCS20000	20000	38	12 FLG	28	58	75	14	1 NPT	150	1000
PCS25000	25000	42	16 FLG	32	60	79	16	1 NPT	150	1200

Table 5

* For Chilled Separator add "C" after the model number, e.g. PCS200C

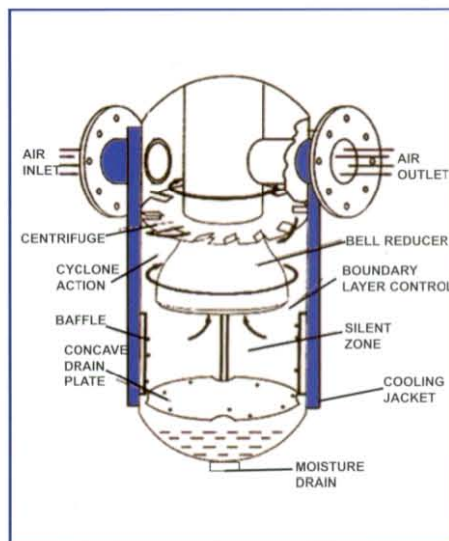


Figure 8. Flow Diagram, PCS200C and Larger

Extractor-Dryer-Filter-Indicator

Ideal for point of used protection from oil, moisture and dirt

'EDF' Series

1. **Multi-step separation**—insures quality
2. **Visible warning**—Transparent housing and sight glass provide visible warnings for changing element
3. **Lower pressure drop**—approximately 2 PSIG. To provide equivalent performance with conventional methods, you need several items with pressure drop of 5–10 PSIG
4. **Adsorbant filter media**— superior performance
5. **Two safety options** -expanded metal safety shield in systems with transparent polycarbonate housing, and the metal housing with dual sight glass for larger sizes and applications where polycarbonate housings may not be safe
6. **Dual sight glass** for easy inspection of filters encased in metal housing. Light enters through one port as you look through the other
7. **Back-saver feature**—Larger filters (500 SCFM and up) have a built-in lift mechanism to prevent back injury and reduce maintenance time



Transparent housing with metal safety shield is standard in sizes through EDF/EDI125. Metal housing with 2 sight glasses is optional in sizes through EDF/EDI125 and standard in

Additional Benefits of 'EDI' Series

8. **Indicator plus feature**—The blue color indicator desiccant provides additional protection from moisture and oil vapors. It turns pale pink when saturated with moisture. Recommended for secondary protection and monitoring

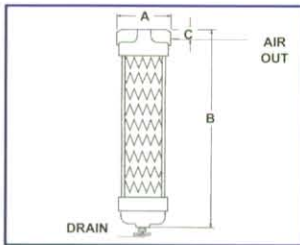
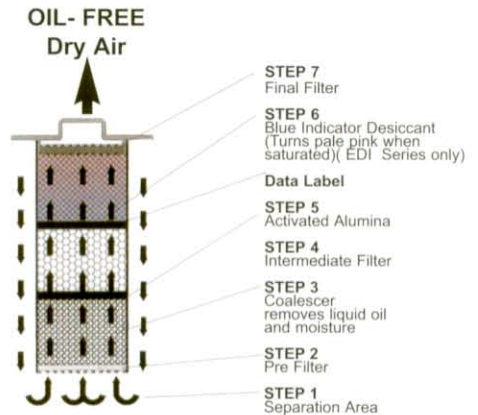


Figure 9. Model EDF/EDI20T through EDF/EDI125T

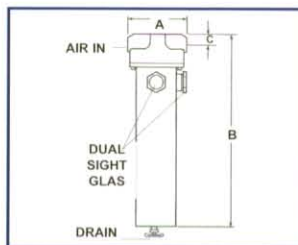


Figure 10. Models through EDF/EDI250M

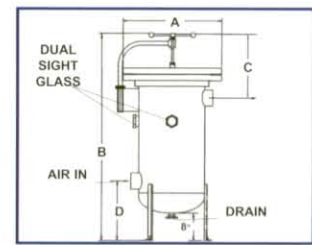


Figure 11. Models EDF/EDI500 and larger

Extractor-Dryer-Filter-Indicator- Specifications & Dimensions

MODELS			APPROX. DIMENSIONS IN INCHES (MM)					CONNECTIONS (NPT)		APPROX. SHIPPING WEIGHT
EXTRACTOR DRYER FILTER	EXTRACTOR DRYER INDICATOR	CAPACITY ¹ IN SCFM (SM ³ /HR)	A	B (EDF)	B (ED _i)	C	D	IN/OUT	DRAIN	
EDF20T(M)	EDI20T(M)	20 (34)	3 (76)	12 (305)	14 (356)	5/8 (16)	-	1/2	1/4	4 (1.83)
EDF65T(M)	EDI65T(M)	65 (110)	5 (127)	14 (343)	16 (406)	3/4 (19)	-	3/4	1/4	10 (4.57)
EDF125T(M)	EDI125T(M)	125 (212)	7 (168)	15 (381)	18 (457)	1 (25)	-	1	1/4	19 (8.68)
EDF250M	EDI250M	250(424)	10 (241)	16 (398)	19 (470)	2 (48)	-	1 1/2	1/4	30 (13.71)
EDF500M	EDI500M	500 (848)	14 (343)	42 (1054)	44 (1118)	15 (381)	15 (381)	2	3/8	125(57.12)
EDF800M	EDI800M	800 (1360)	16 (406)	44 (1118)	47 (1181)	16 (398)	16 (398)	2 1/2	3/8	180(82.26)
EDF1000M	EDI1000M	1000 (1696)	19 (482)	47 (1181)	49 (1244)	15 (381)	16 (406)	3	3/8	270(124)
EDF1200M	EDI1200M	1200 (2035)	19 (482)	48 (1206)	50 (1270)	16 (398)	16 (406)	3	3/8	280 (128)

¹ Capacity @ 100 PSIG (6.9 BAR G)

Suffix "T" indicates unit with acrylic tube, maximum allowable working pressure: 150 PSIG (10.35 BAR G)

Suffix "M" indicates unit with carbon steel tube, maximum allowable working pressure: 250 PSIG (17.25 BAR G)

Maximum allowable temperature is 150°F (65.6°C)

Table 6

* For Chilled Separator add "C" after the model number, e.g. PCS200C

Ultimate Drains

The Ultimate Dual Timer Drains are designed for systems where reliability is critical. They provide a solution to the problem of removing water, oil and gunk from your compressed air system. The solid state circuit controls drain 'on' time as well as 'off' time. Ultimate Drains are ideal for removing condensation from most compressed air equipment.

DTS Series

1. Easy 'ON' and 'OFF' time adjustment
2. Compact design
3. Manual override
4. Power 'ON' indicator
5. Drain 'ON' or 'OPEN' indicator
6. 6-foot power cord
7. NEMA 4 electrical
8. Heavy Duty Solenoid Valve

HD Series

1. Adjustable 'ON' and 'OFF' timer
2. Motorized valve with full port opening
3. Manual override
4. NEMA 4 electrical

Options

1. Higher pressure valves up to 6000 PSIG
2. Stainless Steel valves
3. NEMA 7 electrical
4. 'Y' Strainer and Isolation Valve

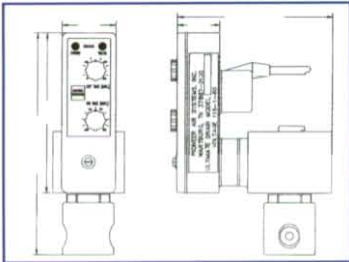


Figure 12. DTS Series



Figure 13. Ultimate Drains

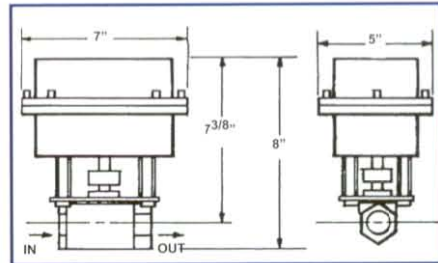


Figure 14. HD Series

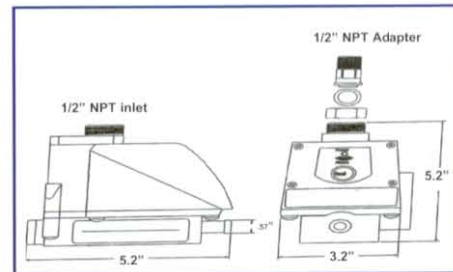


Figure 15. Model ZLD-50

Ultimate Timer Drains- Specifications & Dimensions

MODEL	NPT IN/OUT	ORIFICE SIZE	MAX. PSIG	ON TIME	OFF TIME	ELECTRICAL CONNECTION
DTS1	1/8"	1/16"	300	0.25-25	1-45	6' CORD
DTS2	1/4"	1/8"	300			
DTS4	1/2"	5/16"	200	0.1-102	0.1-102	1/2" CONDUIT HOLE
DTS2H	1/4"	1/16"	3000			
DTS3H	3/8"	5/16"	1500			
HD5	1/2"	1/2"	600	Standard Voltage 115 V.A.C.	Optional Voltage 230 V.A.C.	
HD5S*	1/2"	1/2"	2000			
HD7	3/4"	3/4"	600	Standard Voltage 115 V.A.C.	Optional Voltage 230 V.A.C.	
HD7S*	3/4"	3/4"	2000			
HD10	1"	1"	600	Standard Voltage 115 V.A.C.	Optional Voltage 230 V.A.C.	
HD10S*	1"	1"	2000			

Table 7.

* Indicates stainless steel motorized valves

NEW!! Zero Loss Drain

Model ZLD-50 electronic condensate drains are designed for economical removal of unwanted water, oil emulsion and other liquids from your compressed air/gas systems. The overall operation cost is lowered by the zero loss of expensive compressed air or gas. A liquid level sensor controls openings & closing of valves to prevent loss of air/ gas

1. Zero air/gas loss
2. Automatically adjusts to 24V to 230V
3. MWP - 250 PSIG
4. Drain Capacity 8 gal @ 100 PSIG
5. NEMA 4 x electrical
6. Material - Aluminum coated high impact plastic
7. Test buttons for manual discharge
8. Alarm light indicates drain malfunction
9. Sealed- Viton
10. 1/2" Npt Adapter included



Warranty

Standard products are warranted to be free from defects in material and workmanship for a period of one year from the date of shipment provided the equipment is used according to the company's recommended usage. The company's liability is limited to the repair of, refund of, purchase price paid for, or replacement in kind of, at its sole option, in no event shall the company be liable or responsible for transportation, incidental, consequential damages, even if the possibility of such damages has been made known to it. The usual maintenance and replacement-type products are not covered by this warranty. One year mechanical parts only warranty applies to equipment, outside the U.S.A., Canada and Mexico. Ten year limited warranty is standard in Separators & Filter housings.



PIONEER AIR SYSTEMS, INC.

- 4,761,968
- 4,638,852
- 4,499,033
- 5,107,919
- 5,207,895

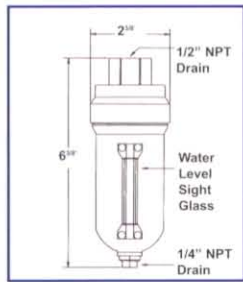


Figure. Economy Float Drain

Economy Float Drain

1. Bowl is threaded for simple removal
2. MWP- 250 PSIG @ 175°F (79°C)
3. Automatic drain valve activated by liquid level
4. The float is protected by screened chamber for reliability

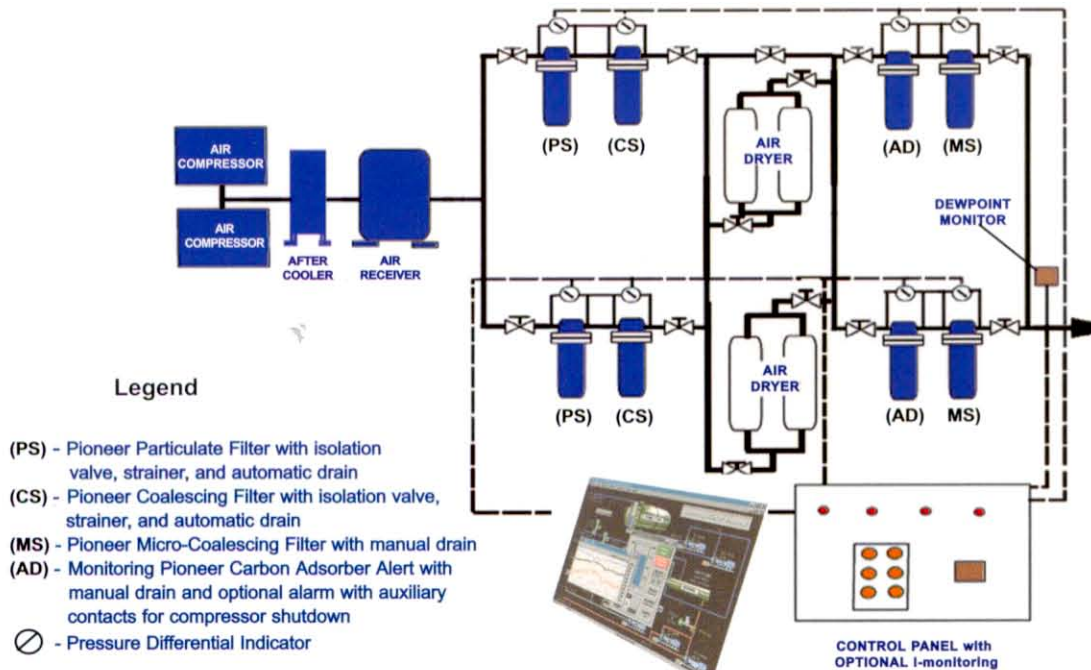
Customized Packaged Systems



Trailer or skid mount with or without dryer Electrical or NonElectrical



Custom Designed Skid Mount System with PC & WEB Monitoring/Controls



Legend

- (PS) - Pioneer Particulate Filter with isolation valve, strainer, and automatic drain
- (CS) - Pioneer Coalescing Filter with isolation valve, strainer, and automatic drain
- (MS) - Pioneer Micro-Coalescing Filter with manual drain
- (AD) - Monitoring Pioneer Carbon Adsorber Alert with manual drain and optional alarm with auxiliary contacts for compressor shutdown
- ⊗ - Pressure Differential Indicator