



**domnick hunter**



## **ED2000 Series Condensate Drains**

## False economy?

Consider the compressed air and energy losses associated with the common types of drain. What appears to be a good purchase could actually turn out to be the most expensive option. For example, a system using a single timed drain, could lose approximately 0.062m<sup>3</sup>/min (2.18 cfm) of air.

Over a full year of continuous operation that equates to approximately 32,498m<sup>3</sup> (1,142,669 ft<sup>3</sup>) of air lost!

In energy terms that single drain would use 3,581 KW (4,804 hp) of energy per year!

Now multiply by every drain of that type in the system.

## The Problem

Compressed air is an essential power source that is widely used throughout industry. This safe, powerful and reliable utility can be the most important part of your production process. However, your compressed air will contain water, dirt, wear particles, bacteria and even degraded lubricating oil which all mix together to form an unwanted condensate. This condensate, often acidic, rapidly wears tools and pneumatic machinery, blocks valves and orifices causing high maintenance and costly air leaks. It also corrodes piping systems and can bring your production process to an extremely expensive standstill!

Removal of condensate from separation, filtration and dryer packages is simply a case of using a drain valve, however most are purchased on their initial price only, with little thought to their maintenance and running costs. The hidden cost with the most common drain types, lies within their operation, that is they discharge expensive compressed air.

## The Efficient Solution

domnick hunter ED2000 series level sensing drains detect and discharge only when condensate is present. With no mechanical sensor parts and a sensing system that works with all types of compressed air condensates, including aggressive oil-free, the intelligent operation always ensures no loss of valuable compressed air.

Drain Type	Typical Air Loss			Energy required to generate air	
	m <sup>3</sup> /min	m <sup>3</sup> /h	cfm	Kw	hp
<b>ED2000 Series</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
½" Manual drain (½ open)	2.6	156	92	17.3	23.2
Mechanical float drain (stuck open)	0.28	17	10	1.89	2.53
Disc/steam trap	0.11	6.8	4	0.76	1.02
Timed drain	0.06	3.7	2.18	0.41	0.55

Based upon an operating pressure of 7 bar g (102 psi g)

NB. Discharge timings and durations for timed drains vary from system to system as do the orifice sizes of all drains.

## User benefits

- **Saves valuable compressed air.**  
Saving Air – Saves Energy – Saves Money.
- **Removes liquid condensate efficiently**  
Eliminates the risk of condensate carryover.
- **Protects downstream equipment and processes from condensate damage.**
- **Simple to install**  
multiple inlet design offers flexibility during installation.
- **Helps protect the environment**  
By using less electrical energy, CO<sub>2</sub> emissions from fossil fuel burning power stations are reduced.

**ED2000 Series condensate drains are the reliable, easy to install, cost effective solution for condensate removal, with a model to suit every system or application.**



ED2200, ED2100



ED2300, ED2400, ED2500

## Special Features

- Zero air loss – zero energy loss.
- No pilot air required – unfiltered pilot air used with diaphragm valves block easily. Direct operating valves are employed to eliminate problems and improve efficiency.
- Intelligent sensing system – operates with all compressor condensates.
- Maximum corrosion protection at no extra cost – standard models are suitable for all condensate types including aggressive oil free condensate.
- IP55/NEMA 4 Ingress Protection rating.
- Large inlet connections - prevent blockage and air locks when using single, top entry piping.
- Constantly rated electrical components increase reliability and prevent overheating problems.
- Designed to be suitable for use in tropical climates.
- Remote volt free alarm contacts indicate blockage, overflow and power loss. (Optional on ED2100 & ED2200 models)
- All models supplied with inlet strainers and pre-wired for 115V or 230V ac, 50/60 Hz operation (selectable at time of ordering).



ED2100 installed on a compressor/receiver package.



ED2300 installed on an air receiver.

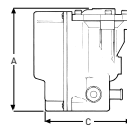
## Technical Specifications

Model	Voltage AC	Frequency	Voltage Free Contacts	Connections		Operating Pressure		Operating Temperature	
				Inlet	Outlet	Max	Min	Max	Min
ED2100-30	230V	50/60Hz	No	1 x G½	8 mm (5/16")	16 bar g	2 bar g	66°C	2°C
ED2100-115	115V			1 x G½	I/d hose	232 psi g	29 psi g	150°F	36°F
ED2100-230AL	230V	50/60Hz	Yes	2 x G½	8 mm (5/16")	14 bar g	2 bar g	66°C	2°C
ED2100-115AL	115V			I/d hose	204 psi g	29 psi g	150°F	36°F	
ED2200-230	230V	50/60Hz	No	1 x G¾	8 mm (5/16")	16 bar g	2 bar g	66°C	2°C
ED2200-115	115V			2 x G¾	I/d hose	232 psi g	29 psi g	150°F	36°F
ED2200-230AL	230V	50/60Hz	Yes	1 x G¾	8 mm (5/16")	16 bar g	2 bar g	66°C	2°C
ED2200-115AL	115V			2 x G¾	I/d hose	232 psi g	29 psi g	150°F	36°F
ED2300-230	230V	50/60Hz	Yes	1 x G¾	G¾	16 bar g	2 bar g	66°C	2°C
ED2300-115	115V			2 x G¾	I/d hose	232 psi g	29 psi g	150°F	36°F
ED2400-230	230V	50/60Hz	Yes	1 x G¾	G¾	16 bar g	2 bar g	66°C	2°C
ED2400-115	115V			2 x G¾	I/d hose	232 psi g	29 psi g	150°F	36°F
ED2500-230	230V	50/60Hz	Yes	1 x G¾	G¾	16 bar g	2 bar g	66°C	2°C
ED2500-115	115V			2 x G¾	I/d hose	232 psi g	29 psi g	150°F	36°F

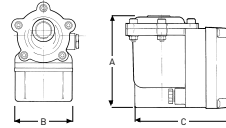
# Weights & Dimensions

Model	Dimensions mm (ins)			Weight kg (lbs)
	A	B	C	
ED2100	118.0 (4.6)	75.13 (2.9)	116.7 (4.6)	0.8 (1.76)
ED2200	114.0 (4.5)	99.0 (3.9)	138.0 (5.4)	0.9 (1.98)
ED2300	142.0 (5.6)	186.3 (7.3)	141.6 (5.5)	3.2 (7.0)
ED2400	142.0 (5.6)	258.8 (10.2)	141.6 (5.5)	4.0 (8.8)
ED2500	142.0 (5.6)	371.8 (14.6)	141.6 (5.5)	4.7 (10.3)

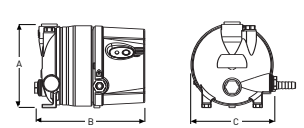
Model ED2100



Model ED2200



Models ED2300/2400/2500



## Product Selection

### Climate Condition 1

Ambient temperature at compressor inlet:	25°C (77°F)
Relative humidity at compressor inlet:	65% RH
Compressor discharge temperature:	35°C (95°F)
System pressure:	7 bar g (102 psi g)
Refrigeration Dryer Dewpoint:	2°C (36°F)
Shift Pattern:	24 hour use

### Climate Condition 2

Ambient temperature at compressor inlet:	35°C (95°F)
Relative humidity at compressor inlet:	85% RH
Compressor discharge temperature:	45°C (113°F)
System pressure:	7 bar g (102 psi g)
Refrigeration Dryer Dewpoint:	2°C (36°F)
Shift Pattern:	24 hour use

Model	Compressor/Air Receiver Flow Rates		
	m <sup>3</sup> /min	m <sup>3</sup> /hr	cfm
ED2100	5.25	315	185
ED2200	10.5	629	370
ED2300	30	1802	1060
ED2400	130	7803	4592
ED2500	170	10201	6004

Model	Compressor/Air Receiver Flow Rates		
	m <sup>3</sup> /min	m <sup>3</sup> /hr	cfm
ED2100	1.9	116	68
ED2200	3.9	232	136
ED2300	11.1	663	390
ED2400	47.9	2872	1690
ED2500	62.6	3755	2210

Model	Refrigeration Dryer Flow Rates		
	m <sup>3</sup> /min	m <sup>3</sup> /hr	cfm
ED2100	12	719	423
ED2200	24	1438	846
ED2300	68.6	4118	2424
ED2400	297.2	17835	10497
ED2500	388.6	23317	13724

Model	Refrigeration Dryer Flow Rates		
	m <sup>3</sup> /min	m <sup>3</sup> /hr	cfm
ED2100	6.6	397	233
ED2200	13.2	793	467
ED2300	37.8	2271	1337
ED2400	163.9	9835	5789
ED2500	214.3	12858	7568

The above selection tables show the maximum air flow rates for each of the ED2000 Series drains, when used at different points in a compressed air system and operating in the climatic conditions shown. The refrigeration dryer flow rates, OIL-Xplus filter and WS Water Separator selections assume that adequate condensate removal has been provided at the compressor intercooler/aftercooler and the air receiver. Shift pattern assumes 24 hour use, should a system be used for 12 hours/day, 5 days a week or less, please contact your local domnick hunter approved distributor/agent for correct sizing.



### OIL-Xplus Filter and WS Water Separator Selection

ED2100 suitable for OIL-Xplus models 0009G – 1000G and WS models WS15 – WS50

ED2200 suitable for WS models WS100 – WS800



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