DHA Series Externally Heated & DBA Series Blower Purge Adsorption Dryers

aerospace
climate control
electromechanical
filtration
liquid & gas handling
hydraulics
pneumatics
process control
sealing & shielding

Parker
domnick hunter

ENGINEERING YOUR SUCCESS.

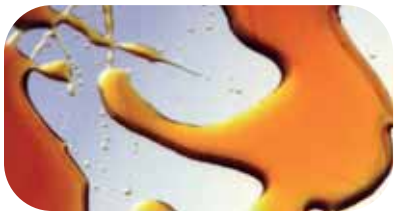
Compressed Air - The 4th Utility

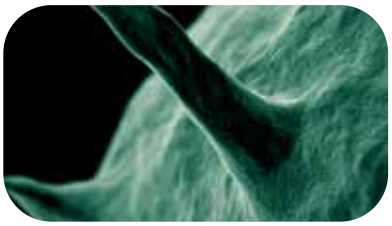
Compressed air is a safe and reliable power source that is widely used throughout industry. Approximately 90% of all companies use compressed air in some aspect of their operations, however unlike gas, water and electricity, compressed air is generated on-site, giving the user responsibility for air quality and operational costs.

Without proper treatment, compressed air systems suffer from performance and reliability issues. Almost all of these issues can be directly attributed to contamination, the main sources of which are:

- **The ambient air being drawn into the compressor**
- **The type and operation of the air compressor**
- **Compressed air storage vessels**
- **Distribution pipework**

There are 10 major contaminants found in a compressed air system, these are:





- **Water Vapor**
- **Condensed Water**
- **Water Aerosols**
- **Atmospheric Dirt**
- **Rust**
- **Pipescale**
- **Liquid Oil**
- **Oil Aerosols**
- **Oil Vapor**
- **Micro-organisms**

The largest quantity of contamination introduced into the compressed air system originates from the atmospheric air drawn into the compressor and, not as often believed, introduced by the compressor itself. The most prolific and problematic of the contaminants is water. Water accounts for 99.9% of the total liquid contaminants found in a compressed air system.

Contaminant Removal

Failure to remove this contaminant can cause numerous problems in the compressed air system, such as:

- **Corrosion within storage vessels and the distribution system**
- **Blocked or frozen valves, cylinders, air motors and tools**
- **Damaged production equipment**
- **Premature unplanned desiccant changes for adsorption dryers**

In addition to problems associated with the compressed air system, allowing contamination such as water, particulate, oil and micro-organisms to exhaust from valves, cylinders, air motors and tools, can lead to an unhealthy working environment with the potential for personal injury, staff absences and financial compensation claims.

High efficiency compressed air filtration is not only used to remove particulate and oil, but most importantly, it removes water aerosols and is key to operating an efficient compressed air system.

Therefore, regardless of what type of compressor is installed, the same level of filtration is required.

Compressed air contamination will ultimately lead to:

- **Inefficient production processes**
- **Spoiled, damaged or reworked products**
- **Reduced production efficiency**
- **Increase manufacturing costs**

What is adsorption drying?

Drying compressed air through adsorption represents a purely physical process in which water vapor (adsorbate) is bound to the drying medium (adsorbent) through binding forces of molecular adhesion. Adsorbents are solids in spherical and granular form which are permeated by an array of pores. The water vapor is deposited onto the internal and external surface of the adsorption medium, without the formation of chemical compounds taking place, therefore the adsorption medium does not have to be replenished but only periodically regenerated.

Externally Heated

With their external and autonomous regeneration equipment, **domnick hunter's DHA Series** dryers are independent of compressor operation. Widely differing regeneration energy sources as heat carriers result in flexible , economical utilization also in explosion proof areas. Pressure dewpoints down to -100˚F (-73˚C) can be achieved with continuous operation. Pressure release and expansion during switch-over occurs only once within the 4-hour half-cycle and can be programmed to occur in a delayed manner, thus achieving reduced noise emission levels. Without proper pre-filtration, the regeneration air can be polluted by solids and this may influence not only the adsorber but also its adsorbing material. Increasing differential pressure inside the adsorber impairs the flow of regeneration air, resulting in a proportionally longer heating time. High inlet temperature accompanied by low operating pressure to reduce the capacity of the drying medium considerably, at the same time increasing the heat of reaction up to the lower range of regeneration temperatures, so that reliable adsorption is no longer assured throughout the entire cycle.

Externally heated regeneration adsorption dryers are used:

- for pressure dewpoints down to -100˚F (-73˚C)
- medium pressure and temperature ranges
- for CO2 gas drying
- if the ambient air contains a high dust level
- in an atmosphere rich in toxic substances

Blower Purge

Adsorption dryers with external heat regeneration and ambient blower system require only small quantities of processed and treated compressed air for purging and for building up pressure. The quantity of air required for regeneration is blown in , or drawn in from the surrounding atmosphere by means of a blower. An adsorption dryer with vacuum regeneration forms a logical and consistent further development. There is a growing tendency for using such system also in tower performance ranges thanks to the efficiencies that can be realized. Operating by blower regeneration offers a wide ranging freedom for adaptation to problematic marginal conditions. The regeneration system, consisting of a blower and a heater, is selected from a wide range of choices. Using different materials, customer-specific requirements can be met.

Behind the scenes of a DHA Series Externally Heat Reactivated & DBA Series Blower Purge Dryer

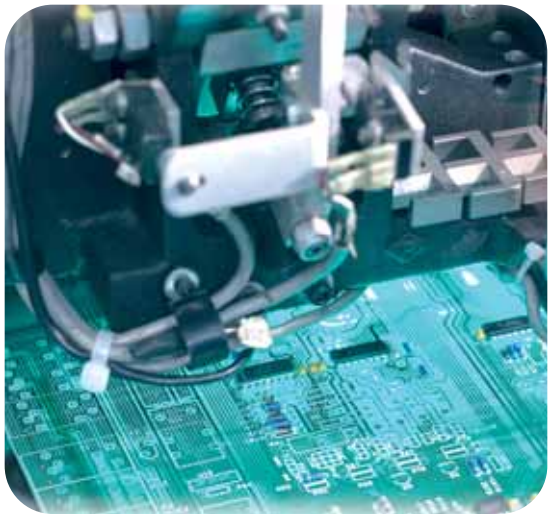
domnick hunter DHA Series Externally Heated Reactivated Desiccant Dryers use the adsorption method to remove moisture from compressed air. Pressure dewpoints ranging from -40˚F (-40˚C) to -100˚F (-70˚C) are achieved by directing the flow of saturated compressed air over a bed of desiccant. The most commonly used desiccant is activated alumina, a spherically shaped, hygroscopic material, selected for its consistent sizes, shape and extreme surface to mass ratio. This physically tough and chemically inert material is contained in two pressure vessels commonly referred to as “dual” or “twin” towers. As the saturated compressed air flows through the bed of the “on-line” tower, its moisture content adheres to the desiccant. The dry compressed air is then discharged from the vessel into the distribution system.

A microprocessor-based controller cycles the flow of compressed air between the towers. While one tower is “on-line” drying, the other tower is “off-line” regenerating. Regeneration, sometimes referred to as “purging”, is the process of stripping the accumulated moisture from the “off-line” bed.

Both types of **domnick hunter** heat reactivated dryers (**DHA Series** Externally Heat Reactivated & **DBA Series** Blower Purge) combine heat with either a small portion of the dried compressed air or with forced ambient air for regeneration.

As heated, low pressure, purge air flows through the regenerating bed, it desorbs the moisture that had accumulated on the surface of the desiccant during the drying cycle and exhausts it to the atmosphere.

A cool-down cycle strips the heat from the bed so that a dewpoint/temperature spike is avoided.

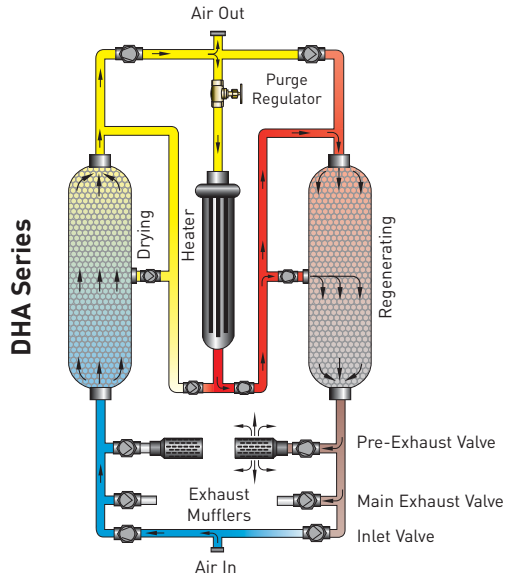


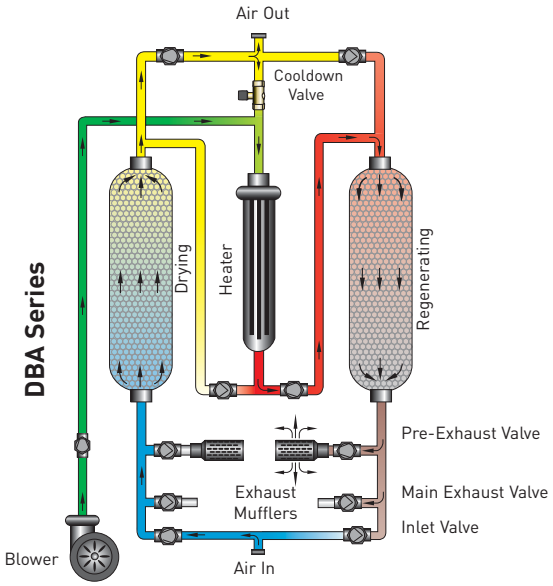
Flow schematic

domnick hunter patented Multi-Port Regeneration System (**DHA Series**) ensures superior desiccant bed regeneration and, as a result, provides better and more consistent dewpoint. The Multi-Port Regeneration System injects heated purge air at precise points up and down the length of the towers to provide a more balanced distribution of heat. This system prevents the desiccant on top from prematurely deteriorating while providing the bottom of the chamber with enough heated purge air to allow complete regeneration on every cycle.

The energy saving temperature monitoring system senses the exiting purge air temperature. When the purge air temperature increases to a pre-set point at which the desiccant bed is fully heated and regenerated, the blower and heater are turned off.

domnick hunter's Secondary Blowdown System is standard on all **DHA** and **DBA Series** heat reactivated dryers 1000 scfm and larger. Secondary blowdown improves performance and efficiency while increasing desiccant life. The depressurization stage strips moisture from the bottom of the tank through a purge muffler. Once depressurization is complete, the system switches to the main exhaust where final regeneration is accomplished with low pressure purge air. Bypassing the exhaust mufflers eliminates back pressure and allows for more thorough regeneration.





Standard equipment

- **Alarm, failure to switch**
- **Alarm, contacts for common**
- **Annunciator, systems sequence**
- **Blower flow interlock (DBA Models)**
- **Blower silencer (DBA Models)**
- **Compressor surge protection**
- **Control center**
- **Control system, dual redundant (Heat Protection System [HPS])**
- **Cycle stepping**
- **Dual mode, heatless backup**
- **Fail-safe operation**
- **Filter, control air**
- **Filters, pre & after**
- **Heater, long-life, low watt density**
- **Independent switching valves**
- **Indicator, moisture**
- **Indicator, purge flow**
- **Instrumentation, full**
- **Insulation, indoor tower**
- **Over-temperature safety control**
- **Ports, separate tower fill/drain**
- **Power saver exhaust shutdown**
- **Pressure equalization**
- **Screens, stainless steel diffuser**
- **Solid state sensors**
- **Standby mode**
- **Thermostats, dual heater**
- **Valves, cushioned seat check**
- **Valves, high performance butterfly (1000 scfm & larger)**
- **Vessels, ASME coded**
- **Warranty, 10-year heater**
- **Warranty, 5-year valve**

Optional equipment

- **Actuator, valve limit switch**
- **Filters, pre and after sets**
- **Insulation, outdoor**
- **Modbus**
- **NEMA classifications, all**
- **Non-yellow metals**
- **Pressure to 1000 psi g**
- **purecare purecare SmartWatch**
- **Voltages, non-standard**

High performance components

Full-flow angle seat valves

Dryers up to 800 scfm are equipped with **Parker's** time-proven and dependable non-lubricated full-flow angle seat valves, which carry a Five Year Warranty. (through 2")

Rotary actuated valves

High performance, rotary actuated switching valves are standard on dryers 1000 scfm and larger. These premium, air operated butterfly valves are specifically designed for compressed air. They provide more opening and closing force compared to other types of valves. An indicator shows the "opened/closed" position of the valve and service can be performed without disturbing dryer piping. (3" and larger)

These valves are so reliable, they carry a Five Year Factory Warranty.

Tower insulation

The tower, heater, and purge lines are insulated to increase dryer performance and efficiency by reducing radiant heat loss. It also keeps the unit within the safety parameters set forth by OSHA. Insulation suitable for indoor service is standard on all **domnick hunter** heat reactivated dryers (Insulation suitable for outdoor service is an available option).

High-efficiency, quiet running regenerative (up to 3000 scfm) or centrifugal blowers (4000 scfm and larger)

Low-wattage high incoloy sheathed heater for efficient regeneration

Patented Multi-Port Injection for superior heat distribution and cooling (DHA Series only)

eControl Center

domnick hunter's eControl Center for Heat Reactivated Desiccant Air Dryers features a full complement of data acquisition functions. The easy to use **eControl** affords superior dryer control along with digital telemetry for remote analysis of performance.

- **Software included for virtual control, diagrams and graphics**
- **purecare SmartWatch ready with 68 channels of data & over 60 process valves**
- **Temperature & pressure instrumentation package**
- **Dewpoint Dependent Switching (DDS) - Optional**
- **4-20mA input with setpoint and alarm for connection to your flow meter**
- **Intelligent display with operational information**
- **Full system retentive alarm network (event) log**
- **Programmable process setpoints**
- **Dryer operating "state" annunciation display**
- **Automatic data logging 24/7, 365 days of all operational information**
- **16 channel "programmable" common alarm**
- **RS-232 communications port (Optional RS-485)**
- **Access system via purecare SmartWatch or Modbus protocols**
- **160 fields of operational information**
- **Connectivity: telco line, cellular wireless modem, cellular wireless internet, Ethernet**
- **Dual Mode communications. Modbus protocol, and purecare SmartWatch Protocol**
- ETL LISTED CONFORMS TO UL STD 1995 3092035 CERTIFIED TO CAN/CSA STD C22.2 NO.236

eControl operational status

Temperature (thermistor sensors)
- Purge air
- "Special" (fail-safe) heater over temperature
- Left exhaust
- Right exhaust
- Dryer inlet
- Dryer outlet

Pressure (transducer signals can be either 4-20ma or 1-5 volt DC)
- Inlet
- Left tower
- Right tower
- Purge
- Prefilter psi d (400 scfm and larger)
- Afterfilter psi d (400 scfm and larger)

Dewpoint Dependent Switching (DDS) - optional
- Digital readout with power save feature

eControl operational status

Dewpoint Dependent Switching (Optional)

Compressed air systems are rarely constant and the dryer regeneration cycle frequency is dependent upon the actual inlet flow, pressure and temperature. Operation under inlet conditions where there is lower than design flow and temperature and or higher pressure, will result in less regeneration cycles and a maximum in the cost of utilities.

Dewpoint Dependent Switching (DDS) provides a precision demand cycle control which terminates the adsorption (drying). This results in the full adsorptive capacity of the desiccant bed being utilized prior to switch over and regeneration.

DDS is built into the dryer control system, with a precision hygrometer producing a continuous display of the outlet dewpoint. The preset contacts of the instruments are utilized to initiate tower changeover.

Digital readout

eControl features a backlit four line character display that monitors operation and status including regenerating countdowns and time remaining.

Sequence annunciator

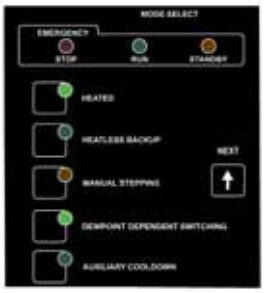
Indicates the status of each tower. LED's indicate which tower is "on-line" drying, "off-line" regenerating as well as the regeneration stages.

Manual stepping

Allows the operator to quickly and safely step the dryer through a complete 8 hour cycle, in a matter of minutes.

Heater Protection System (HPS) (10 year heater warranty)

eControl also controls **domnick hunter's** Heater Protection System (HPS). HPS ensures maximum reliability and eliminates the safety concerns often associated with heat reactivated dryers. Heaters are protected by a totally redundant dual shutdown system that utilizes independent mercury contactors. In addition to the redundant temperature controllers, the system monitors pressure and shuts the heater down in the event of low line pressure. Blower purge dryers have controls to prevent the heater from energizing if the blower is not running.



Dual mode heatless back up system

Allows the dryer to function in either the primary heated mode or the auxiliary heatless mode. Should the system experience a temporary overload or a heater failure, the dryer can easily be switched over to operate in the heatless mode. This way the dryer will remain online until such time as service can be conveniently scheduled. The Dual Mode Back Up System offers unparalleled flexibility, eliminates downtime and prevents business interruptions.

Design parameters

domnick hunter DHA & DBA Series are designed to process a specific volume of compressed air and deliver it to the discharge at a desired pressure dewpoint. Both dryers are rated for a -40˚F (-40˚C) pressure dewpoint. Dewpoint spikes, inherent on all blower purge dryers, are reduced by activating **domnick hunter's** standard Supplemental Cooldown Purge feature. Standard ratings are based on inlet conditions of +100˚F (38˚C), 100 psi g (6.9 bar g) and 100% flow. (Dryer performance will vary with different inlet conditions).

Moisture load, velocity, contact time and cycle time determine the amount of desiccant required. To assure design performance, each tower is carefully sized to allow a minimum contact time of 7 seconds. To prevent bed movement, desiccant dusting and fluidization, air flow velocity is kept below 55 feet per minute. Externally Heated and Blower Purge dryers are designed for an eight-hour cycle (four hours "on-line" drying, four hours "off-line" regenerating, cooling and repressurizing). For significant energy savings and Digital Dewpoint Readout, all domnick hunter desiccant dryers can be equipped with an optional **Dewpoint Dependent Switching (DDS**).

Dewpoint Dependent Switching (DDS)

An overview

The adsorption capacity of the desiccant within the dryer is essentially constant whereas the moisture loading and the air flow through the dryer are continuously varying as ambient and plant conditions change. In order to maintain the specified air quality downstream of the dryer, it has to be sized for the worst case conditions, namely the lowest pressure, highest flow and highest inlet temperature. These conditions may only occur for a small part of the service life of the dryer, for example, the highest inlet temperatures may only be present during the summer months. This means that the moisture loading on the desiccant beds is below the dryer's capacity for much of its service life (e.g. quiet periods in between shifts usually have lower air supply requirements).

To gain access to this dynamic adsorption capacity, a moisture sensor is fitted which continually monitors the downstream dewpoint. DDS interrupts the normal sequence of the controller, which is only permitted to change over when the desiccant has adsorbed moisture to its capacity, effectively elongating the drying cycle. However, as regeneration has been optimized for a fully laden desiccant bed, this remains of constant duration resulting in a period of zero energy consumption (i.e. purging is discontinued). In this way, energy savings are obtained while maintaining a constant supply of clean dry air to your plant.

OIL-X EVOLUTION: the complete package

OIL-X EVOLUTION pre & after filters are included as standard on **DHA & DBA Series**.

OIL-X EVOLUTION filters provide air quality in accordance with ISO 8573.1:2001, the international standard for compressed air quality.

OIL-X EVOLUTION coalescing filters are the first range of filters specifically designed to deliver air quality in accordance with ISO 8573.1:2001 when tested with the stringent requirements of the new ISO 12500-1 international for Compressed Air Testing.

OIL-X EVOLUTION filter performance has been independently verified by Lloyds Register.

OIL-X EVOLUTION coalescing and dust removal filters are covered by one year compressed air quality guarantee.

The air quality guarantee is automatically renewed with annual maintenance.

purecare

purecare goes well beyond simply designing a compressed air network. We stay close to the user, ensuring the system is correctly installed and commissioned and maintained throughout the service life of the dryer.

- extended warranty programs
- genuine **domnick hunter** preventive maintenance kits
- factory trained and certified service technicians
- immediate technical assistance via phone/**purecare SmartWatch**
- factory auditing
- training for local personnel
- global support

purecare ensures that the user's system operates perfectly and at the minimum cost at all times and for many years to come. Because neither time nor technology stand still, we ensure our users will continue to receive the very best support and the most advanced solutions. **purecare** will allow our users to concentrate on doing what they do best...maximizing their business.
Welcome to **purecare**.

Technical Data

Model	Capacity scfm (Nm³/min)	Heater kW	Avg kW	Dimensions in (mm)			Approx Weight lbs (kg)	Prefilter	Afterfilter	Air In/Out	Power Supply (V/Ph/Hz)
				A	B	C					
DHA 250	250 (7.1)	3	1.9	45 (1143)	39 (991)	84 (2134)	1180 (535)	AA-035GNFI	AR-035GNMI	1½" NPT	240/1/60
DHA 300	300 (8.5)	4	2.3	47 (1194)	39 (991)	84 (2134)	1370 (621)	AA-035GNFI	AR-035GNMI	1½" NPT	460/3/60
DHA 400	400 (11.3)	6	3.0	74 (1880)	41 (1041)	90 (2286)	1400 (635)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DHA 500	500 (14.1)	6	3.7	74 (1880)	41 (1041)	90 (2286)	2060 (934)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DHA 600	600 (17.0)	9	4.5	74 (1880)	41 (1041)	96 (2438)	2350 (1066)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DHA 800	800 (22.7)	9	6.0	96 (2438)	48 (1219)	90 (2286)	3035 (1377)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DHA 1000	1000 (28.3)	13	7.4	96 (2438)	48 (1219)	101 (2564)	4195 (1903)	AA-055JNFI	AR-055JNMI	3" NPT	460/3/60
DHA 1200	1200 (35.4)	13	8.9	96 (2438)	48 (1219)	101 (2564)	5215 (2365)	AA-055JNFI	AR-055JNMI	3" NPT	460/3/60
DHA1500	1500 (42.5)	18	11.2	144 (3658)	72 (1829)	101 (2564)	5715 (2592)	AA-2250ODFI	AR-2250ODMI	4" Flg	460/3/60
DHA 2200	2200 (62.3)	25	16.4	144 (3658)	72 (1829)	101 (2564)	6250 (2835)	AA-2250ODFI	AR-2250ODMI	4" Flg	460/3/60
DHA 2600	2600 (73.6)	25	22.3	144 (3658)	72 (1829)	101 (2564)	6750 (3062)	AA-2300ODFI	AR-2300ODMI	4" Flg	460/3/60
DHA 3000	3000 (84.9)	30	29.7	144 (3658)	72 (1829)	110 (2794)	7055 (3200)	AA-2350PDFI	AR-2350PDMI	6" Flg	460/3/60
DHA 4000	4000 (113.3)	38	37.0	168 (4267)	78 (1981)	114 (2896)	18080 (8201)	AA-2350PDFI	AR-2350PDMI	6" Flg	460/3/60
DHA 5000	5000 (141.6)	50	44.6	210 (5334)	90 (2286)	114 (2896)	20710 (9394)	AA-2400QDFI	AR-2400QDMI	6" Flg	460/3/60

*Referenced to 68°F (20°C) and 14.5 psi a (1 bar a)

Flow Range @ 100 psi g (7 bar g):	250 scfm (7.1 Nm³/min) to 5000 scfm (141.6 Nm³/min)
Dewpoint:	-40°F (-40°C) Standard , -100°F (-70°C) Optional
Maximum operating pressure: **Minimum operating pressure:**	140 psi g (10.3 bar g) 80 psi g (5.5 bar g) (Lower minimum pressures available. Consult factory.)
Maximum inlet temperature: **Minimum inlet temperature:**	120°F (49°C) 50°F (10°C)
Controls:	Microprocessor
Dewpoint control optional	
Standard electrical supply:	Model DHA 250: 240V/1Ph/60Hz Model DHA 300 - DHA 5000: 460V/3Ph/60Hz, Control power 115V/1Ph/60Hz (575V/3Ph/60Hz Optional)

Flow correction factors

Inlet Air Pressure Correction

psi g	50	60	70	80	90	100	110	120	130	140	150
bar g	3.5	4.1	4.9	5.5	6.2	6.9	7.6	8.3	9.0	9.7	10.3
Factor	0.56	0.65	0.74	0.83	0.91	1.00	1.09	1.18	1.27	1.37	1.43

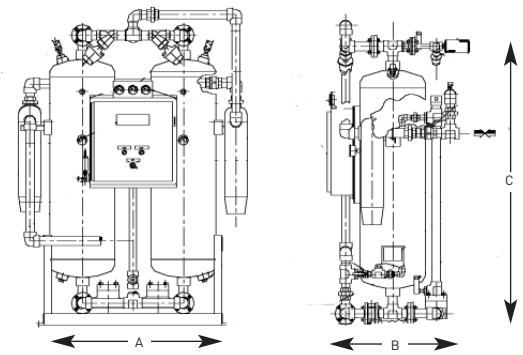
Temperature Correction

F	90	95	100	105	110	115	120
C	32	35	38	41	43	46	49
Factor	1.35	1.16	1.00	0.85	0.74	0.64	0.56

Example Calculations:
DHA 500 corrected for 120 psi (8.3 bar)
+110°F (43°C)

Corrected Capacity
= (Rated Capacity) x (psi Correction) x (Temperature Control)
= 500 scfm (13.9 Nm3/min) x (1.18) x (.74)
= 437 scfm (12.1 Nm3/min)

DHA Series



Model	Capacity scfm (Nm³/min)	Blower HP	Heater kW	Avg kW	Dimensions in (mm)			Approx Weight lbs (kg)	Prefilter	Afterfilter	Air In/Out	Power Supply (V/Ph/Hz)
					A	B	C					
DBA 500	500 (14.1)	2	12	7.4	74 (1880)	41 (1041)	90 (2286)	2840 (1288)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DBA 600	600 (17.0)	2	12	8.6	96 (2438)	48 (1219)	96 (2438)	3420 (1551)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DBA 800	800 (22.7)	5	18	13.4	108 (2743)	54 (1372)	90 (2286)	4490(2037)	AA-050INFI	AR-050INMI	2½" NPT	460/3/60
DBA 1000	1000 (28.3)	5	18	15.7	108 (2743)	54 (1372)	101 (2565)	5700 (2585)	AA-055JNFI	AR-055JNMI	3" NPT	460/3/60
DBA 1200	1250 (35.4)	5.5	25	18.4	108 (2743)	54 (1372)	113 (2870)	6300 (2858)	AA-055JNFI	AR-055JNMI	3" NPT	460/3/60
DBA 1500	1500 (42.5)	7.5	30	23.5	144 (3658)	72 (1829)	100 (2540)	8250 (3742)	AA-2250ODFI	AR-2250ODMI	4" Flg	460/3/60
DBA 2000	2200 (62.3)	7.5	38	31.6	144 (3658)	72 (1829)	100 (2540)	9850 (4468)	AA-2250ODFI	AR-2250ODMI	4" Flg	460/3/60
DBA 2600	2600 (73.6)	10	50	38.3	156 (3962)	84 (2134)	110 (2794)	12210 (5538)	AA-2300ODFI	AR-2300ODMI	4" Flg	460/3/60
DBA 3000	3000 (84.9)	10	60	42.9	156 (3962)	84 (2134)	111 (2819)	15170 (6881)	AA-2350PDFI	AR-2350PDMI	6" Flg	460/3/60
DBA 4000	4000 (113.3)	15	75	58.6	204 (5182)	96 (2438)	114 (2896)	18910 (8577)	AA-2350PDFI	AR-2350PDMI	6" Flg	460/3/60
DBA 5000	5000 (141.6)	15	100	70.2	204 (5182)	96 (2438)	114 (2896)	21590 (9793)	AA-2400QDFI	AR-2400QDMI	6" Flg	460/3/60
DBA 6000	6000 (169.9)	20	115	86.0	204 (5182)	96 (2438)	114 (2896)	26500 (12020)	AA-2400QDFI	AR-2400QDMI	6" Flg	460/3/60
DBA 7500	7500 (212.4)	25	135	107.0	210 (5334)	96 (2438)	114 (2896)	28800 (13063)	AA-2450RDFI	AR-2450RDMI	8" Flg	460/3/60
DBA 9000	9000 (254.8)	30	150	129.0	220 (5588)	102 (2591)	126 (3200)	32100 (14560)	AA-2450RDFI	AR-2450RDMI	8" Flg	460/3/60

*Referenced to 68°F (20°C) and 14.5 psi a (1 bar a)

Flow Range @ 100 psi g (7 bar g):	500 scfm (14.1 Nm³/min) to 9000 scfm (254.8 Nm³/min)
Dewpoint:	-40°F (-40°C) Standard, -100°F (-70°C) Optional
Maximum operating pressure:	150 psi g (10 bar g)
Minimum operating pressure:	80 psi g (5.5 bar g) (Lower minimum pressures available. Consult factory.)
Maximum inlet temperature:	120°F (49°C)
Minimum inlet temperature:	50°F (10°C)
Controls:	Microprocessor
Dewpoint control optional	
Standard electrical supply:	460V/3Ph/60Hz, Control power 115V/1Ph/60Hz (575V/3Ph/60Hz Optional)

Flow correction factors

Inlet Air Pressure Correction

psi g	50	60	70	80	90	100	110	120	130	140	150
bar g	3.5	4.1	4.9	5.5	6.2	6.9	7.6	8.3	9.0	9.7	10.3
Factor	0.56	0.65	0.74	0.83	0.91	1.00	1.09	1.18	1.27	1.37	1.43

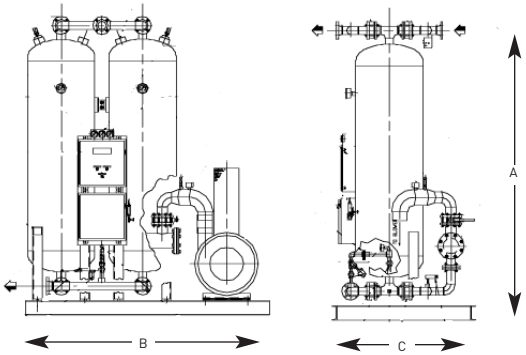
Temperature Correction

F	90	95	100	105	110	115	120
C	32	35	38	41	43	46	49
Factor	1.35	1.16	1.00	0.85	0.74	0.64	0.56

Example Calculations:
DBA 500 corrected for 120 psi (8.3 bar)
+110°F (43°C)

Corrected Capacity
= (Rated Capacity) x (psi Correction) x (Temperature Control)
= 500 scfm (13.9 Nm3/min) x (1.18) x (.74)
= 437 scfm (12.1 Nm3/min)

DBA Series



Parker

dh domnick hunter

domnick hunter Canada
Ontario, Canada
Tel: (905) 820-7146
Toll Free: 1-888-342-2623
Fax: (905) 820-5463

www.domnickhunter.com