

Construction and Industrial Rental Equipment Catalog



Always By Your Side.

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We specialize in Temporary Climate Solutions, Document Recovery Services and Emergency Drying Services.

At Polygon, we have built a culture around emergency response and engineered solutions. With the **world's largest fleet of company-owned equipment**, experienced personnel and a dedicated 24/7 Customer Support Center, Polygon sets the standard for effective and immediate response.

With national coverage, company-trained technicians and experienced client management teams, Polygon provides a complete emergency drying service offering with unmatched consistency, quality and results.

Whether it is to supply backup HVAC equipment to a malfunctioning building system or to regain control of interior conditions after a weather event, Polygon supplies rental equipment to ensure building occupancy and business continuity.

When Environment Control is Important

Polygon is the expert in emergency, temporary or short-term humidity and temperature control for construction projects, manufacturing, event air conditioning or industrial coating applications. We provide integrated dehumidification and temperature control equipment for any industrial or commercial project of any size. With 20 offices throughout North America, we will respond to your call quickly. We offer a full range of equipment and have the experience gained in more than a half century of engineering solutions for temporary environmental control problems.

An Engineering Company

Polygon has unsurpassed application engineering knowledge, which we will bring to the solution of your climate control problem. We provide more than rental equipment, we provide the expertise you need to solve your problem. Polygon equipment has allowed hundreds of construction projects to finish on schedule. We have provided environmental control to preserve the world's most valuable art. Our services have allowed hundreds of manufacturing applications to continue during high humidity periods. We serve at tank coating projects across the continent. Polygon has protected equipment ranging from spare parts inventories to battleships.

Working with a diverse range of applications allows us to gain extensive experience which we bring to all projects to assure we best meet our customer's needs.

Avoid Capital Expenditures

If your project requires humidity or temperature control, but there is no budget for an equipment purchase, Polygon can help. Our equipment provides the results you need, when you need it, giving you all the benefits of ownership without the cost and commitment.

An Expert Staff

All of our project leaders have successfully completed courses in:

- psychrometrics
- desiccant dehumidification
- refrigeration and heating equipment
- climate control for special events and environments, as well as many other technical subjects related to environmental control. They are trained to help you evaluate your situation and to provide the guidance necessary to successfully build the system you need.



Portable Desiccant & Refrigerant Dehumidifiers

Tough, Effective, Dependable Equipment

Polygon offers a broad line of portable desiccant and refrigerant dehumidifiers for water damage drying or humidity control in smaller environments. Providing air flow rates from 50 to 450 SCFM, Polygon dehumidifiers are easy to move to the job site, run on building power, and offer dependable performance through the duration of your project.

Typical applications for small dehumidifiers include:

- carpet drying
- water damage restoration in small or confined areas
- temporary humidity control for storage
- protection against corrosion
- prevention of mold growth.

All Polygon's dehumidification equipment is engineered and manufactured to meet both an industrial standard and the demands of the rental market. It is designed to be lifted or rolled into place, runs quietly for indoor use and is ruggedly constructed to stand up to the rigors of the job site. Polygon can provide additional equipment required, including ductwork, air movers and filtration equipment, to build the temporary system you need for your project. Our equipment is supported on a 24-hour basis by our well-trained and experienced technical staff. When you choose Polygon equipment, you will also benefit from our quarter-century of experience as the leading supplier of desiccant dehumidification equipment.

Refrigerant Dehumidifiers

Polygon offers seven models of refrigerant based small dehumidifiers that provide efficient economical service when ambient air is warm and moisture laden. They feature highly efficient rotary compressors for fast, high volume moisture removal and drying after water damage. Many include built in wheels and handles for easy movement around the job site. All offer standard 115 volt operation.

Desiccant Dehumidifiers

Polygon uses the world's leading desiccant dehumidifiers. These rugged small units provide deeply dried air even in environments with temperatures well below 0°F. These are an excellent choice for water damage drying, critical inventory protection, or sensitive manufacturing environments such as clean rooms.

Leading Technologies

At the heart of all Polygon desiccant dehumidifiers is the world's leading rotor technology. Using a solid desiccant rotor, Polygon equipment removes moisture from the air with controlled efficiency, providing the volume of dehumidified air specifically required for your application.

Polygon dehumidifiers have been chosen to protect priceless artwork and historical treasures, irreplaceable archival records, critical defense department equipment and stores, and have been used on water damage restoration projects after every major natural disaster since 1984.



MCS-300



M-200

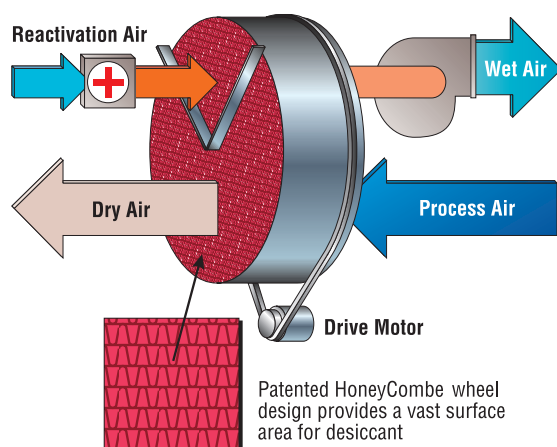


DZ-LGR-2000



HC-300

Portable Dehumidifiers								
Model	Air Flow (CFM)	Static Pressure (inches)	Dry Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)
M-120	70	1.0	4	24	24	24	50	115 V, 1 phase, 60 Hz, 12 FLA
M-200	120		4	35	20	39	110	115 V, 1 phase, 60 Hz, 15.5 FLA
MH-240	140		4	19	21	24	60	115 V, 1 phase, 60 Hz, 13 FLA
HC-150	150	1.0	4.375 Outlet/Supply, 3.14 x 13.5 Inlet/Return	26	19.25	18.3	70	230 V, 1 phase, 60 Hz, 14 FLA
MCS-300	177	1.5	5	16	16	22	50	115 V, 1 phase, 60 Hz, 18 FLA
HC-300	300	2.0	8	30	24	24	110	230 V, 1 phase, 60 Hz, 33 FLA, or 460 V, 3 phase, 60 Hz, 15 FLA
DZ-LGR-2000	320			24	22.5	40.5	132	115 V, 1 phase, 60 Hz, 8 FLA
DZ-2400	365	N/A	N/A	24	27	47	162	115 V, 1 phase, 60 Hz, 11 FLA
LGR-7000 XLi	325	N/A	12	20	20	34	107	115 V, 1 phase, 60 Hz, 8.3 FLA



When the air to be dried is passed through the HoneyComb® rotor, the desiccant removes the moisture directly from the air and holds it while the wheel rotates. As the moisture laden desiccant passes through the reactivation sector, water vapor transfers to the heated air stream, which is exhausted. The process continues allowing for uninterrupted dehumidification. The rotor and the speed at which it rotates has been optimized to provide the maximum moisture removal for the energy consumed. Polygon dehumidifiers are a minimum of 10% more efficient than the competitive technology.

Large Volume Desiccant Dehumidifiers

Engineered for the Rental Market

Polygon offers the broadest and most sophisticated line of desiccant dehumidifiers available on the rental market today.

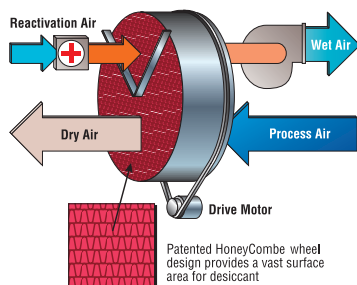
Applications include:

- water damage recovery
- humidity control for manufacturing
- condensation control in tank coating
- drying to speed construction activities
- humidity control to protect inventories and sensitive materials during storage
- protection against mold growth.

All Polygon's dehumidification equipment is engineered and manufactured to meet both an industrial standard and the demands of the rental market. All units are designed to be lifted and moved easily and withstand all types of weather. As well, our equipment is ruggedly constructed to stand up to the rigors of the job site. Polygon rentals are supported on a 24-hour basis by our well-trained and experienced technical staff. When you choose Polygon equipment, you will also benefit from our 30 plus years of experience, as the leading supplier of desiccant dehumidification equipment.

Leading Technologies

At the heart of all Polygon dehumidifiers is the world's leading desiccant technology. Using a solid desiccant rotor, Polygon equipment removes moisture from the air with controlled efficiency, providing the volume of dehumidified air specifically required for your application. Polygon dehumidifiers have been chosen to protect the Space Shuttle before launch, are used in thousands of manufacturing applications, and have served the rental market since 1984.



When the air to be dried is passed through the HoneyCombe Titanium rotor, the Silica Gel desiccant removes the moisture directly from the air and holds it while the wheel rotates. As the moisture laden desiccant passes through the reactivation sector, water vapor transfers to the heated air stream,

which is exhausted. The process continues allowing for uninterrupted dehumidification. The rotor and the speed at which it rotates has been optimized to provide the maximum moisture removal for the energy consumed. Polygon dehumidifiers are a minimum of 10% more efficient than the competitive technology.



Hybrid HCU-3000



Hybrid HCU-6000



ProDry 1400 Electric Dehumidifier



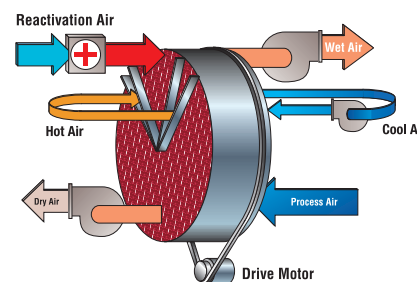
R-5000 Tri Fuel Dehumidifier



HC-4500 Electric with gas or steam regenerated desiccant dehumidifier



DHi-125-ESU: Tri Fuel with PowerPurge™



Polygon Desiccant Wheel Technology with PowerPurge™. The new patented PowerPurge™ energy saving system will reduce your cost of operation by cutting electrical consumption. PowerPurge greatly enhances operating

efficiency by recovering waste heat from the hottest section of the desiccant rotor and then uses it to help with the regeneration. PowerPurge also removes heat from the discharge air, cutting the cost of post cooling. In most cases, PowerPurge can reduce your electricity cost by 40%.

Hybrid Desiccant Dehumidifiers

Model	Air Flow (CFM)	Static Pressure (inches)	Dry Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Recommended Generator (kW, kVA)
HCU-3000	2,400-3,400	1.0	18	114	58	60	2,500	460 V, 3 phase, 60 Hz, 32 FLA	36 (45)
HCU-6000	4,000-6,000	1.5	1x18 Outlet/Supply, 2x18 Inlets/Returns	126	84	75	5,200	460 V, 3 phase, 60 Hz, 78 FLA	66 (82)
HCU-6000 PLUS	4,000-6,000	3.0	1x20 Outlet/Supply, 2x18 Inlets/Returns	152	89	89	7,000	460 V, 3 phase, 60 Hz, 89 FLA	100 (125)
HCU-8000	6,000-8,000	3.0	2x18 Outlet/Supply, 2x18 Inlets/Returns	150	86	90	6,000	460 V, 3 phase, 60 Hz, 101 FLA	100 (125)

HCU dehumidifiers utilize a packaged refrigeration system in conjunction with an active titanium silica gel desiccant wheel. The HCU operates cost-effectively because all of the energy required for the regeneration of the desiccant wheel is recycled from the condenser waste heat. The system is integrally designed and controlled for superior performance in even the highest humidity load conditions.

All Electric Desiccant Dehumidifiers

Model	Air Flow (CFM)	Static Pressure (inches)	Dry Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Recommended Generator (kW, kVA)
GC-150	150	2.0	4	23.7	21.8	38.5	170	460 V, 3 phase, 60 Hz, 4.7 FLA	10
HC-600	300-600	4.0	8	58	26	56	460	460 V, 3 phase, 60 Hz, 18.6 FLA	20 (25)
ProDry 1400	600-850	1.0	8	48	29.5	62	460	230 V, 1 phase, 60 Hz, 30 FLA	
HC-1125	600-1,500	2.5	12	88	45	75	1,000	460 V, 3 phase, 60 Hz, 29 FLA	36 (45)
DHi-20	600-2,000	2.0	12	85	30	51	1,000	460 V, 3 phase, 60 Hz, 38 FLA	36 (45)
HC-2250	1,125-2,665	3.5	12	96	47	84	1,050	460 V, 3 phase, 60 Hz, 52 FLA	56 (70)
DHi-35	1,125-3,500	2.5	12	108	46	63	1,050	460 V, 3 phase, 60 Hz, 68 FLA	56 (70)

Polygon HC Series desiccant dehumidifiers provide a wide range of volumes to meet the specific needs of tank coating and water damage recovery projects. They have also been used on thousands of storage and manufacturing applications. Polygon ProDry dehumidifiers have been designed for drying construction spaces to speed construction activities such as dry wall installation. Polygon DHI Series dehumidifiers use patented PowerPurge technology to save energy in two ways. The unique, patented PowerPurge acts as an energy recovery system, collecting waste heat off of the hottest section of the desiccant wheel and using it to help with the regeneration. This reduces the energy required for reactivation while also reducing the discharge temperature of the process air, resulting in lower energy costs for post cooling.

Electric with Gas or Steam Regenerated Desiccant Dehumidifiers

Model	Air Flow (CFM)	Static Pressure (inches)	Dry Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Recommended Generator (kW, kVA)	Fuel Burn	Working Gas Pressure (psig unless noted)
M-10	1,125-3,000	2.5	12	96	46	73	3,150	460 V, 3 phase, 60 Hz, 66 FLA (electric), 460 V, 3 phase, 60 Hz, 15 FLA (gas)	50 (70), 20 (25) gas	1-3 Therms/hr natural gas, 1-3 gal/hr propane	0.5-5
HC-4500	2,250-5000	4.5	18	132	48	73	2,200	460 V, 3 phase, 60 Hz, 107 FLA (electric) or 460 V, 3 phase, 60 Hz, 22 FLA (gas/steam)	100 (125), 25 (30) gas/steam	2-5 Therms/hr natural gas, 2-4 gal/hr propane	0.5
M-20	2,250-5,000	4.5	12	141	61	61	3,800	460 V, 3 phase, 60 Hz, 107 FLA (electric), 460 V, 3 phase, 60 Hz, 22 FLA (gas)	100 (125), 36 (45) gas	2-5 Therms/hr natural gas, 2-4 gal/hr propane	0.5-5
HC-9000	4,500-10,325	8.0	1x18 Outlet/Supply, 2x18 Inlets/Returns	140	76	91	7,000	460 V, 3 phase, 60 Hz, 274 FLA (electric), 460 V, 3 phase, 60 Hz, 35 FLA (gas/steam)	240 (300), 50 (60) gas/steam	5-9 Therms/hr natural gas, 5-10 g/hr propane	0.5
R-10000	4,500-10,000	5.0	2x18/20 Outlets/Supply, 2x18/20 Inlets/Return	180	90	104	6,500 (8,000)	460 V, 3 phase, 60 Hz, 265 FLA (electric), 460 V, 3 phase, 60 Hz, 50 FLA (gas)	211 (225)	8 gal/hr diesel for electric, 3 gal/hr diesel for gas, 5-9 Therms/hr natural gas, 6-10 gal/hr propane	4" to 10" water column
R-15000	4,500-15,000	5.0	3x18/20 Outlets/Supply, 2x18/20 Inlets/Return	211	88	104	7,700 (11,200)	460 (406) V, 3 phase, 60 Hz, 440 FLA (electric), 460 V, 3 phase, 60 Hz, 90 FLA (gas)	330 (350)	21 gal/hr diesel for electric, 7.4 gal/hr diesel for gas, 5-9 Therms/hr natural gas, 6-10 gal/hr propane	4" to 10" water column
R-5000	5,000	5.0	18/20	99	52	104	3,600	460 V, 3 phase, 60 Hz, 125 FLA (electric) 460 V, 3 phase, 60 Hz, 50 FLA (gas)	100 (125)	6 gal/hr diesel for electric, 3 gal/hr diesel for gas, 2-3 Therms/hr natural gas, 2-3 gal/hr propane	
DHi-125-ESU Tri-Fuel	4,500-12,500	3.0	2x18 Outlets/Supply, 2x18 Inlets/Returns	171.5	90	100	8,000	460 V, 3 phase-electric reactivation, 272 FLA, and 460 V, 3 phase-gas reactivation, 35 FLA	240 (300), 36 (45) gas	5-9 Therms/hr natural gas, 5-10 gal/hr propane	0.5-5

Polygon offers desiccant dehumidifiers that provide an air flow range of 1,125 to 15,000 scfm, while offering regeneration options of electric, gas or steam.

Industrial Air Conditioners

Easily Installed Temporary Air Conditioning Units

Polygon offers a diverse line of industrial temporary air conditioning equipment designed to address the varying temperature and humidity control needs of the rental market. Polygon equipment offers packaged refrigerant based cooling in conjunction with packaged heat. The equipment operates cost effectively with a high “cooling capacity to supply air ratio”. Polygon equipment can efficiently remove moisture from air with high temperature and humidity. Our equipment offers capacities ranging from 1,000–20,000 SCFM, and is designed to deliver higher volumes through the combination of multiple units. Typical applications include:

- water damage recovery
- warehouses, and industrial plant shutdowns and maintenance
- cooling for tents and indoor event locations
- condensation control in tank coating
- drying to speed construction activities
- humidity control to protect inventories and sensitive materials during storage.

All Polygon’s air conditioning equipment is engineered and manufactured to meet both an industrial standard and the demands of the rental market. It is designed to be lifted and moved easily, withstand all types of weather, and is ruggedly constructed to stand up to the rigors of the job site. Some models may be stacked for a smaller foot print. Our equipment is supported on a 24-hour basis by our well-trained and experienced technical staff.

Equipment Benefits

Polygon equipment provides outstanding humidity control and cooling using refrigerant technology. It has the capability to remove large amounts of water from the air at high temperatures and humidity levels. To meet market demand for ease of use and maneuverability, these units come on a unitary skid with a single-point power connection. Integrated cooling and heating provides operational flexibility. Installation is fast with skid mounted design and single-point power connection.

Our air conditioning units offer independent control of cooling and heating for deep dehumidification.



DX-80



DX-40

Other Product Line Features

- High performance design
- 200-300 SCFM per ton cooling ratio
- Delivered air temperatures of 55°F are attainable
- Configurable air flow: outside air and return air connections
- Weatherproof: corrosion protected coils for demanding environments
- Electrical controls: continuous automatic operation including motor starters, overload protection and independent temperature control.

Industrial Air Conditioners

Model	Air Flow (CFM)	Static Pressure (inches)	Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Recommended Generator (kW, kVA)
DX-1 (1.2) Ton	1,000	1	2x8 outlets/supply, open inlet	46	31	53	500	208 V, 1 phase, 15 FLA	20 (25)
DX-3 Ton	1,800	3	18	46	31	53	500	208 V, 1 phase, 15 FLA	20 (25)
DX-5 Ton	9,000	6.5	16	67	22	55	710	460 V, 3 phase, 18 FLA, or 280 V, 3 phase, 37 FLA	10 (12.5)
DX-6 Ton	1,800	3	1x12 outlet/supply, 2x12 inlets/returns	95	53	49	1,360	460 V, 18 FLA, and 460 V, 58 FLA with reheat	20 (25), 48 (60) with reheat
DX-30 Ton	5,000-6,500	3	1x18 outlet/supply, 2x18 inlets/returns	126	84	75	4,300	460 V, 79 FLA, and 460 V, 166 FLA with reheat	66 (82), 144 (180) with reheat
DX-30 Ton-H	10,000	3	2x20 outlets/supply, 4x20 inlets/returns	165	96	70	5,400	460 V, 3 phase, 55 FLA cooling only, and 460 V, 3 phase 111 FLA with reheat	66 (82), 144 (180) with reheat
DX-40 Ton	3,915-9,000	6.5	20	88	78	100	4,620	460 V, 3 phase, 68 FLA	75 cooling only
DX-60 Ton-H	21,000	3	4x20 outlets/supply, 9x20 inlets/returns	264	102	99	9,250	460 V, 127 FLA, and 460 V, 150 FLA	80 (100), 100 (125) with reheat
DX-80 Ton	17,000	3	4x18 outlets/supply, 3x18 inlets/returns	180	96	102	11,800	460 V, 3 phase, 145 FLA cooling only, and 460 V, 3 phase, 246 FLA with heating	100 (125), 175 (219) with reheat

Air Conditioning Load Guidelines

Application	Estimated Feet ² /Ton
Large Office Building (exterior)	225-275
Large Office Building (interior)	300-375
Small Office Building	325-375
Apartments	350-450
School Classrooms	225-275
Retail Stores	200-250
Hospital Patient Rooms	250-300
Hotel Guest Rooms	250-300
Auditoriums (tons/seat)	0.05-0.07
Bank (main areas)	200-250
Factory (precision mfg.)	250-300
Church (tons/seat)	0.04-0.06
Bowling Alley (tons/alley)	1.5-2.5
Motel	400-500
Residences	500-700
Supermarkets	250-350
Computer Rooms	50-150
Restaurants	100-2500

Air Calculations

Sensible Heating:	BTUH capacity = Temperature Change x SCFM x 1.08 kW of heating capacity = BTUH / 3.414
Sensible Cooling:	BTUH capacity = Temperature Change x SCFM x 1.08 Tons of cooling capacity = BTUH / 12,000
Sensible/Latent Cooling:	BTUH capacity = Enthalpy change x SCFM x 4.5 Tons of cooling capacity = BTUH / 12,000
Temperature Change: (Sensible Only)	ΔT = BTUH / (SCFM x 1.08)
BTU/ HR Needed (Sensible Only)	BTUH = SCFM x 1.08 x ΔT needed
Humidification:	Lb. / Hr. = SCFM x 4.5 x ΔM /7000
Air Velocity:	FPM = SCFM / Face Area in Sq. Ft.
Air Volume:	SCFM = FPM x Face Area in Sq. Ft. Where: FPM = Velocity of airstream in ft./ min. 18" duct = 1.7671 ft. ² 12" duct = .7854 ft. ² 8" duct = .3490 ft. ²
Blended Air Streams:	$T_{blend} = ((T_A \times SCFM_A) + (T_B \times SCFM_B)) / (SCFM_A + SCFM_B)$ $M_{blend} = ((M_A \times SCFM_A) + (M_B \times SCFM_B)) / (SCFM_A + SCFM_B)$ Where: T is temperature of the air stream(°F) M is moisture of the air stream (gr/lb)

Chillers and Cooling Coil Modules

Highly Efficient Operation for Cooling and Dehumidification Projects

Polygon offers a line of rental chillers and coil modules easily integrated for efficient cooling or dehumidification. Chillers range in size from 10 to 200 tons. Coil modules can produce air flow ranges of 600 to 22,000 SCFM.

Chillers

The Polygon chiller line has been designed to meet the specific needs of our customers, providing outstanding performance where temporary cooling or efficient dehumidification of warm, moist air is required.

The line provides outstanding water and glycol chilling capability using refrigerant technology. The chillers utilize packaged refrigeration systems in conjunction with an integrated circulation pump. The packaged air cooled chiller operates cost effectively with high efficiency scroll compressors, allowing the unit to effectively meet changing loads across a wide range of ambient conditions.

Units are built with an integrated chiller barrel, water circulation pump and controls. The packaged design allows for faster set-up and smallest footprint on site. These superior quality units offer high efficiency, ease of operation, run quietly and are environmentally responsible. For fast set-up and ease of use and maneuverability, these units come skid mounted.

They offer single-point power connection and three inch cam lock water connections. When you need cooling fast, Polygon air-cooled, scroll chillers are packaged with chilled water pump on a single skid.

Cooling Coil Modules

Polygon cooling coil modules provide outstanding dehumidification and cooling using chilled water. They have the capability to remove large amounts of moisture from the air at high temperatures and humidity. All units are made to perform up to rigorous standards in a variety of applications.

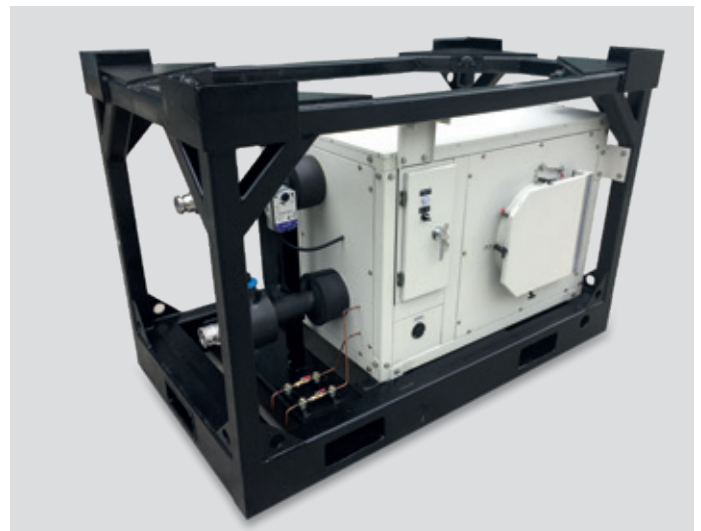
Polygon cooling coil modules offer weather tight construction for indoor and outdoor use. They can be powered with job site electricity or a portable generator. They are skid mounted, light weight and offer rugged construction with a low profile, compact design for ease of transportation. Quick and easy access to all electrical and mechanical components has been designed in for ease of maintenance. Set-up is made simple with a quick chilled water connection typically with 3" cam lock fittings, and generous flanged supply air connections.



210 Ton Chiller



AHU-120



Cooling Coil 25

Chillers								
Model	Water Connections (inches)	Gallons per minute	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Recommended Generator (kW, kVA)
Chiller-10 Ton	1	30	82	66	60	1,800	460 V, 3 phase, 60 Hz, 50 FLA	48 (60)
Chiller-20 Ton	3	60	96	96	88	2,000	460 V, 3 phase, 60 Hz, 50 FLA	48 (60)
Chiller-35 Ton	4	84	152	44	99	4,500	460 V, 3 phase, 60 Hz, 78 FLA	50 (62.5)
Chiller-50 Ton	3	150	156	96	102	6,000	460 V, 3 phase, 60 Hz, 110 FLA	80 (100)
Chiller-65 Ton	2x3	150	265	99	81	8,000	460 V, 3 phase, 60 Hz, 200 FLA	176 (220)
Chiller-70 Ton	4	150	162	89	99	8,000	460 V, 3 phase, 60 Hz, 160 FLA	100 (125)
Chiller-100 Ton	4	400	219	98	98	8,000	460 V, 3 phase, 60 Hz, 180 FLA	176 (220)
Chiller-200 Ton	6	750	247	99	104	18,000	460 V, 3 phase, 60 Hz, 336 FLA	250 (312)
Chiller-210 Ton	6	750	432.5	88	99	28,000	460 V, 3 phase, 60 Hz, 350 FLA	250 (312)

Cooling Coil Modules										
Model	Air Flow (CFM)	Air Connections (inches)	Water Connections (inches)	Gallons per minute	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Recommended Generator (kW, kVA)
Cooling Coil Module-1125	600-1,125	12	2	13	40	21	18	500	120 V, 1 phase, 60 Hz, 10 FLA	2
Cooling Coil Module-2250	1,125-2,250	12	2	26	82	52	50	700	120 V, 1 phase, 60 Hz, 10 FLA	2
Cooling Coil Module-25	2,500	18	2	50	44	75	54	1,870	120 V, 1 phase, 60 Hz, 10 FLA	
Cooling Coil Module-4500	2,250-4,500	18	4	65	100	79	54	1,600	120 V, 1 phase, 60 Hz, 10 FLA	2
Cooling Coil Module-50	2,500-5,000	18	4	110	95	70	84	3,400	120 V, 1 phase, 60 Hz, 10 FLA	
Cooling Coil Module-9000	4,500-9,000	2x18 outlets/supply, 2x18 inlets/returns	4	121	102	96	64	2,000	120 V, 1 phase, 60 Hz, 10 FLA	2

Chiller Features

- High performance design with five gallons/ton parameters
- Application flexibility: chill water or brine, in ambient from 0°F to 125°F
- Low ambient control
- The industry's highest design and off-design efficiencies
- Graphical user-interface control center
- Scroll-compressor design has fewer moving parts, increasing reliability
- Designed to deliver chilled water on a temporary basis with three inch cam lock hose connections integrated
- Skid mounted design and single-point power connection.

Cooling Coil Module Features

- High capacity for volume of process air
- Designed for outdoor use (NEMA 4)
- Single-point electrical connection
- Quiet operation with insulated panels to dampen noise
- Periodic changing of filters only recommended maintenance on site
- Side discharge/return connection of chilled water for ease of application.

Indirect Fuel Fired Heaters

Clean, Safe Heat

Polygon offers a full line of indirect fuel fired heaters with stainless steel heat exchangers that produce a warm air stream free of fumes, moisture and other products of combustion. Ductwork connections allow heaters to be placed away from the work area, allowing harmful exhaust to be vented safely. These heaters can be used safely in applications with dangerous fumes or dust in the work space, as flames are contained and away from the hazards. Polygon units can produce between 1,000–10,000 SCFM. Common applications include:

- buildings under construction
- special event tents
- temporary work areas
- heating for disaster recovery.

All Polygon indirect heating equipment is designed to meet the demands of the rental market. Polygon units can be lifted and moved easily, or trailered into position. Units are manufactured to withstand all types of weather and are suited for outside or well-ventilated environments. Our equipment is supported on a 24-hour basis by our well-trained and experienced technical staff.



Campo 1000



Cube 1200



Campo 400

Indirect Fired Heaters													
Model	Heating Capacity (BTU/hr)	Max Obtainable Temperature Rise (°F)	Air Flow (CFM)	Static Pressure (inches)	Air Outlet (inches)	Air Inlet (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Fuel Requirements	Fuel Burn
Campo 1000	1,000,000	200 max outlet temp (not temp rise)	13,500	6.5	24	24	111	33.25	50	2,000	208 V, 1 phase, 42 FLA or 240 V, 3 phase, 25 FLA	Propane or Natural Gas	10 Therms/hr
Campo 400	399,000		4,400	3	24	2x12	70	26	53	450	120 V, 15 A, 11.5 FLA	Propane or Natural Gas depending on model	4 Therms/hr
CUBE 1200	1,176,000	200 + heat rise	6,000-11,000	3	2x16	2x16	213	102	90	6,000	Self-contained	Fuel Oil #: 1, 2, A, Diesel	8.4 gal/hr
HD 10	1,000,000 (650,000 low rate)	175	6,000-10,000	3	24	2x18	205	82	73	7,000	460 V, 3 phase, 60 Hz, 15 FLA	Fuel Oil #:1, 2, A	8.6 gal/hr
HDS 12	1,200,000 (650,000 low rate)	180	6,000-10,000	3	24	2x18	264	98	86	7,000	Self-contained	Fuel Oil #:1, 2, A, Natural Gas	8.6 gal/hr, 11 Therms/hr
HDS 4	400,000	180	1,000-2,250	3	12	1x12 Return, 1x12 Makeup	141	72	72	2,500	Self-contained	Fuel Oil #:1, 2	2.9 gal/hr
HG 4	400,000	65	3,850-10,000		18	18	66	60	60	500	115 V, 1 phase, 60 Hz, 2 FLA	Propane, Natural Gas	4.1 gal/hr, 4 Therms/hr

High Volume Electric Heaters

Clean, Dry Electric Heat Where You Need It!

Polygon offers a full line of direct electric heaters to meet every need from space heating at construction projects to temporary heating for large events. Delivering air flows ranging from 600 to 9,000 SCFM and BTU/Hr. rates of 51,000 to over 500,000, The Polygon line can heat your space efficiently and cost-effectively. Our electric heaters provide clean, dry heat, with none of the safety concerns of direct fired fuel heaters. Electric elements produce no by-products and convert 100% of the supplied electric power without adding moisture. Common applications include:

- buildings under construction
- special event tents
- temporary work areas.

A wide variety of air flow combinations are possible with fresh, return, or dehumidified air, to provide precise, efficient climate control. These heavy duty units work well with auxiliary equipment or as a stand alone heat source. They feature clean and efficient open heating elements, weatherproof enclosures (for safe use outdoors) and simple controls.

Polygon's electric heating equipment offers internal fans that are designed to allow long ductwork runs. The unified design combines heater and blower for single-point power and duct connection. The equipment offers simple and reliable operation. It runs safely, provides easy control of outlet temperature, and uses existing facility services for power.



HO-60KW



Blaze 150e



HO-150 Heater

All units feature a completely self-contained design with quick access for easy maintenance. Welded skid with casters and fork lift pockets make job placement easy.

High Volume Electric Heaters													
Model	Heating Capacity (BTU/hr)	Max Obtainable Temperature Rise (°F)	Air Flow (CFM)	Static Pressure (inches)	Air Outlet (inches)	Air Inlet (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)	Fuel Requirements	Recommended Generator (kW, kVA)
150 kw electric	512,100	50	4,500-9,000		18	18	108 (96)	94 (52)	54 (67)	1385 (1000)	460 V, 3 phase, 60 Hz, 180 FLA	N/A	144, 180
150 kw with blower	512,100	53	9,000		20	20	72	48	50	612	460 V, 3 phase, 60 Hz, 248 FLA	N/A	150, 187
Campo 150e	512,000	250 max outlet temp (not temp rise)	14,500	6.5	24	24	68	31.5	56	950	460 V, 3 phase, 205 FLA		
15 kw electric	51,120		600		12	12	60	28	26	240	460 V, 3 phase, 60 Hz, 24 FLA	N/A	20, 25
30 kw electric	102,420		600-1,125		12	12	60	30	40	350	460 V, 3 phase, 60 Hz, 40 FLA	N/A	36, 45
60 kw electric	204,840	86	2,200		18	18	51	43	37	600	460 V, 3 phase, 74 FLA	N/A	
60 kw with blower	204,840		2,200	0.5	18	18	52	43	37	600	460 V, 3 phase, 60 Hz, 74 FLA	N/A	56, 70
64 kw electric	218,496	45	2,000-9,000		18	18	61	34	40	490	460 V, 3 phase, 60 Hz, 80 FLA	N/A	66, 82
64 kw with blower	218,496		3,000-6,000	3	18	18	120	48	39	1,000	460 V, 3 phase, 60 Hz, 88 FLA	N/A	80, 100

Air Movers, Filtration & Humidification Equipment

Polygon provides a range of equipment for the movement, direction and filtration of air on the job site. Whether drying to complete work on spec and on schedule, or removing dangerous particulate during construction activities, Polygon equipment will help manage the air inside your building for safety and to maximize productivity.

Air Movers and Fans

The Polygon line of air movers and fans gives you the ability to deliver conditioned air to areas needing it. Use Polygon open air movers and fans for improved general circulation and direction of air into difficult areas. They move moisture from surfaces into the air to increase the rate of evaporation and aid in construction drying. They are light weight, offer rugged housings and run on 115 volt power.

Axial fans are ducted allowing massive amounts of fresh outside air to be moved to a work environment. They may also be used to create a negative pressure inside the building, keeping dust and particulate under control. Often they are employed to bring large volumes of air to difficult to reach areas such as crawl spaces or manholes.

Filtration Equipment

Polygon offers portable air scrubbers and filtration equipment to control and remove dust and particulate from job sites. Air flows from 1,000 to 9,000 SCFM can be obtained with four stage filtration, including two stage particulate filtration, carbon adsorption and HEPA filtration. Air filters can be used in three ways; 1) Recirculation: continuously filter and recirculate air inside a local environment to capture airborne contaminants. 2) Negative pressure: protect a building from a contaminated or dusty work area by filtering the containment area air and exhausting the filtered air to the outside. This protects airborne particles from leaving the work area. 3) Remote location cleaning: using a flexible duct from the containment area to the scrubber located outside to remove the dirty air and filter it away from an area difficult to reach or unsuitable for the location of the scrubber.



Polygon offers a complete line of air movers, air filtration and humidification equipment.



AS-10



Humidifier FLA-5-50

Evaporative Cooling and Humidifiers

When humidity levels must be maintained, or a low cost source of work area cooling is required, Polygon evaporative cooling equipment offers rugged dependability, and easy set-up and simple operation. Temperature drops of 26°F can be obtained where other forms of air conditioning are impractical.

A single unit can modify temperatures in areas as large as 2,500 square feet. Requiring only 120 volt electrical supply and a water hose connection, Polygon coolers can be rolled into place and immediately begin delivering significant cooling to improve worker productivity.

Air Filtration Equipment								
Model	Air Flow (CFM)	Static Pressure (inches)	Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)
HEPA 500	412			26	18	25	44	120V, 1 phase, 60Hz, 5 FLA
AS-2.5	1,000	1.0	12	27.5	31.5	51	200	115 V, 1 phase, 60 Hz, 15 FLA
Filter HEPA Box	1,125		12	20	30	30	50	
AS-10	2,000	1.0	12 (optional) outlet/supply, 12 inlet/return	32.5	25	29	200	115 V, 1 phase, 60 Hz, 15 FLA
MPA10	2,000		12	32.5	25	29	200	115 V, 1 phase, 60 Hz, 15 FLA
Filter Module 2250	2,250		12	69	46	48	600	N/A
Filter Module 4500	4,500		18	69	60	60	800	N/A
HEPA 7500	7,500	2.1	18	54	51	51	650	N/A
Filter Module 9000	9,000		2x18 outlets/supply, 2x18 inlets/returns	66	85	70	1050	N/A

Air Blowers & Fans								
Model	Air Flow (CFM)	Static Pressure (inches)	Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)
Air Movers	2,250	1.2	open	18.5	17	19	24	115 V, 3 phase, 60 Hz, 7.2 FLA
Air Movers - Axial	2,041	3.2	12	15.7	18.7	19.5	35	115 V, 3 phase, 60 Hz, 7.4 FLA
Axial Fan-Jet CXV	3,200	0.5	18	19	26	26	35	115 V, 3 phase, 60 Hz, 3 FLA
Blower Only - 2250 cfm	2,250	6	12	8				460 V, 3 phase, 60 Hz, 8 FLA
Blower Only - 4500 cfm	4,500	3	18	42	30	40	500	460 V, 3 phase, 60 Hz, 5 FLA
Blower Only - 9000 cfm	9,000	3	18	44	32	40	900	460 V, 3 phase, 60 Hz, 10 FLA
Blower Only - 12000 cfm	12,000	18	2x18 outlet, 2x14 and 6x18 inlets	73	84	88	2,420	460 V, 3 phase, 60 Hz, 60 FLA
Fans - Pedestal	5,500	0.5	open	24	24	53	75	115 V, 3 phase, 60 Hz, 2.6 FLA

Evaporative Cooling and Humidification								
Model	Air Flow (CFM)	Static Pressure (inches)	Air Connections (inches)	Length (inches)	Width (inches)	Height (inches)	Weight (lbs)	Power Requirements (volts, phase, hertz, full load amps)
Humidifier - QC36	9700	0.5	open outlet/supply, 24 inlet/return	32.5	61.5	61.5	400	115 V, 3 phase, 60 Hz, 7.8 FLA
FCA-5-50	5,000	N/A	N/A	35	24	66		120 V, 1 phase, 60 Hz, 3 FLA
FCA-4-20	4,000	N/A	N/A	30	18	55		120 V, 1 phase, 60 Hz, 3 FLA
Nortec NHMC20	N/A	N/A	N/A	14.3	37	41.5	150	460 V, 3 phase, 60 Hz, 86 FLA
Injection Wands - Steam	N/A	N/A	N/A		36	48		

Formulas and Reference Guides

Conversion Formulas		
TO CONVERT	INTO	MULTIPLY BY
Length		
Inches	Centimeters	2.54
Feet	Meters	0.3048
Miles	Kilometers	1.609
Centimeters	Inches	0.39
Meters	Feet	3.281
Kilometers	Miles	0.6214
Area		
Square Inches	Square Centimeters	6.452
Square Feet	Square Meters	0.0929
Square Yards	Square Meters	0.8361
Square Miles	Square Kilometers	2.59
Square Meters	Square Feet	10.764
Weight		
Ounces	Grams	28.35
Pounds	Kilograms	0.45
Grams	Ounces	0.035
Kilograms	Pounds	2.21
Grams Per Pound (gr/lb)	Grams per Kilogram (g/kg)	0.143
Liquid Volume		
Cups	Liters	0.24
Quarts	Liters	0.95
Liters	Quarts	1.06
Liters	Gallons	0.26
Fluid Ounces	Millimeters	29.57
Barrels	Cubic Feet	5.615
Gallons	Cubic Feet	0.1338
Air Volume		
Cubic Feet	Cubic Meters	0.0283
Cubic Meters	Cubic Feet	35.31
Feet ³ /Minute	Meter ³ /Hour	1.699
Meters ³ /Hour	Feet ³ /Minute	0.5882
Miscellaneous		
Tons (refrigeration)	BTU/H	12000
Tons (refrigeration)	Kilowatts	3.52
Kilowatts	BTU/H	3414
Watts	Horsepower	1.34 x 103
PSI (Pounds/Inch ²)	Inches of Water	27.66
Pounds/Foot	PSI (Pounds/Inch ²)	6.944 x 103
Fahrenheit	Celsius	(°F-32) x .56
Celsius	Fahrenheit	(1.8x°C) + 32

Mathematical Formulas		
L = Length	W = Width	H = Height
D = Diameter	R = Radius	C = Circumference
A = Area of Surface	V = Volume	π = Pi = 3.1416
S = Length from top to side of cone	B = Length of Base	
Circle	D = 2R	
	C = 2πR	= D (3.1416)
	A = πR ²	= D ² (0.7854)
Cylinder (e.g.tank)	V = πR ² H	= D ² (0.7854) H
	A = 2πR (H+R)	
Spheres	V = 4πR ³ /3	= D ³ (0.5236)
	A = 4πR ²	= D ² (3.1416)
Cone	V = πR ² H/3	= D ² H (0.2618)
	A = πR (H+S)	
Rectangle	A = L x W	
Rectangle Solid	A = 2 (WL + LH + HW)	
Triangle	A = (B x H) / 2	

Compressed Air		
MULTIPLY	BY	TO OBTAIN
Volume		
Cubic Feet x Minute	0.4723	Liter/Second
Liters/Minute	0.2642	Gallons/Minute
Cubic Meter	35.315	Cubic Feet
Pressure		
Inches Mercury	0.4912	PSI
Inches Water	2.54	mm Water
PSI	27.7	Inches Water
Bar	14.504	PSI

Compressed Air

Rules of Thumb and useful information

*SCFM/ horsepower for air at various discharge pressures:

PSIG	SCFM / BHP
100	4-5.0
125	4.0
150	3.8
300	2.9

- Desiccant dryers de-rate a compressor's capacity (SCFM) due to purge air requirements. This is typically about 13-15%.
- Every 20°F temperature drop in saturated compressed air, 50% of the water vapor condenses into liquid.
- Under average conditions, every 100 SCFM of air compressed to 100 PSIG produces 20 gallons of condensate per day.
- Most instrument air applications require -40°F pressure dew point.
- Air-driven after coolers de-rate a compressor's capacity (SCFM) by about 7%.
- Maximum entry temperature for most dryers and plant air systems is 120°F.
- Most plant air systems have an operating pressure ranging between 90 and 125 PSIG.

Flexible Duct Pressure Drops

Equipment	Process*	Reactivation*
HC-600	8"/0.2	8"/0.15
HC-1125	12"/0.4	12"/0.1
HC-2250	12"/1.5	12"/1.5
HC-4500	18"/0.9	12"/0.4
HC-9000	18"/3.0	N/A

* Flexible duct Dia./Inches of Pressure Loss Per 100 feet of duct.

Notes:

- The fans of the HC Series of equipment generally have sufficient static pressure to handle 100-150 feet of duct.
- Above pressure losses are based upon full extension of the flexible duct.
- For each 90° bend in the duct, add the following equivalent duct length to the actual length of the duct.

Duct Diameter	Add Feet
4 Inches	9 Feet
8 Inches	4 Feet
12 Inches	6 Feet
18 Inches	8 Feet

- Avoid tight bends in the duct set-ups.
- If having difficulty getting the correct manometer readings from the dehumidifier, try the following:
 - Stretch out the duct
 - Straighten out the bends
 - Use larger diameter duct
 - Reduce length of duct
 - Accept the reduced air flow

Values for Heat Calculations	
Typical K values for common insulations:	
Insulation	K-Value
Calcium Silicate	0.0458
Fiber Glass	0.026
Mineral Wool	0.0408
Urethane	0.0128
Vermiculite	0.0309
Super "R" Double Bubble	0.006
Emissivity values for common materials and coatings:	
Material/Coatings	E-Value
Mild Steel	0.20-0.32
Steel Heavily Rusted	0.8
Flat Black Lacquer	0.96-0.98
Aluminum Paint	0.52
Sheet Aluminum	0.09
Snow White Aluminum	0.906

Diesel Fuel Consumption/ kVA/ kW Amperage					
Estimated Diesel Fuel Consumption gals/ hr	kVA	kW	208 Volts	240 Volts	480 Volts
1.5	25	20	69.5	60.2	30.1
2.8	50	40	139	120	60
3.8	75	60	208	181	91
6	93.8	75	261	226	113
8	125	100	347	301	150
10	156	125	433	375	188
12.3	219	175	608	527	264
17.6	312	250	866	751	376
20	375	300	1,040	903	451
29	438	350	1,220	1,053	527

Temperature	
Tons (Fluid) =	G.P.M. x 500 x sp. heat x sp. gravity x gT ÷ 12,000
Tons (Air) =	C.F.M. x 4.45 x gh (enthalpy) ÷ 12,000
kW Head (Structure) =	Surface area x u factor x gT ÷ 3,413
C. F. M. =	Volume x # of required air changes ÷ 60
kW Heat =	C.F. M. x 1.08 x gT ÷ 3,413
kW (Temperature) =	BTU / Hr ÷ 3,413
Tons (Refrigeration) =	BTU / Hr ÷ 12,000
Tons (Nominal)* =	Tons (effective) or BTU /Hr of work ÷ deration factor
* = Low Temperature Applications	

Power and Electrical Formulas		
TO OBTAIN:	SINGLE PHASE	THREE PHASE
Kilowatts	$V \times I \times PF \div 1,000$	$1.732 \times V \times I \times PF \div 1,000$
kVA	$(V \times I) \div 1,000$	$(1.732 \times V \times I) \div 1,000$
Horsepower required when generator kW is known. If generator efficiency is unknown, use 0.93	$kW \div (0.746 \times \text{Efficiency-Generator})$	$kW \div (0.746 \times \text{Efficiency-Generator})$
kW input when motor Hp is known. If motor efficiency is unknown us 0.85 x Hp	$(Hp \times 0.746) \div (\text{Efficiency-Motor})$	$(Hp \times 0.746) \div (\text{Efficiency-Motor})$
Amperes when motor Hp is known	$(Hp \times 746) \div (V \times PR \times \text{Efficiency})$	$(Hp \times 0.746) \div (1.732 \times V \times PR \times \text{Efficiency})$
Amperes when kW is known	$(kw \times 1,000) \div (V \times PF)$	$(kw \times 1,000) \div (1.732 \times V \times PF)$
Amperes when kVA is known	$(kVA \times 1,000) \div V$	$(kVA \times 1,000) \div (1.732 \times V)$
Other Formulas		
Amps	$\text{Volts} \div \text{Ohms}$	Key: V = volts I = amps R = ohms kVA = kilovolt amps kW = kilowatts HP = horsepower PF = power factor (if unknown for single phase use: 0.8, for 3 phase use: 1.0) Eff = motor efficiency (if unknown use: 8.5)
Volts	$\text{Amps} \times \text{Ohms}$	
Ohms	$\text{Volts} \div \text{Amps}$	
Transformer (primary amps)	$kVA \times 1,000 \div \text{primary voltage (single phase)}$	
Transformer (secondary amps)	$kVA \times 1,000 \div \text{secondary voltage (single phase)}$	
Cost to operate equipment	$kW \times \text{hours} \times \text{kw cost per hour}$	

Formulas and Reference Guides

Ampacity of Power Cords				
	Types: Thermoplastic & Thermoset		Type: W&G	
Size	3 Conductors*	2 Conductors*	3 Conductors*	2 Conductors*
14	15	18	N/A	N/A
12	20	25	N/A	N/A
10	25	30	N/A	N/A
8	35	40	57	65
6	45	45	77	88
4	60	70	101	115
2	80	95	133	152
1	N/A	N/A	156	178
1/0	N/A	N/A	180	207
2/0	N/A	N/A	208	238
3/0	N/A	N/A	241	275
4/0	N/A	N/A	277	317

*Note: Number of Current Carrying Conductors

Estimating Process Air Flows				
Approximate process air flows in SCFM at various manometer readings on HC-Series DH equipment				
Manometer Reading	HC-1125	HC-2250	HC-4500	HC-9000
0.7	525	1,050	2,100	4,200
0.8	600	1,200	2,400	4,800
0.9	675	1,350	2,700	5,400
1	750	1,500	3,000	6,000
1.1	825	1,650	3,300	6,600
1.2	900	1,800	3,600	7,200
1.3	975	1,950	3,900	7,800
1.4	1,050	2,100	4,200	8,400
1.5	1,125	2,250	4,500	9,000
1.6	1,200	2,400	4,800	9,600
1.7	1,275	2,550	5,100	10,200
1.8	1,350	2,700	5,400	10,800
1.9	1,425	2,850	5,700	11,400

Note: Units are engineered to give best performance at "name plate" values. Due to reactivation energy constraints, "over-blowing" the units may give higher SCFMs, but at reduced moisture-removal rates, in most situations.

Gas Burner Data							
DH Model	Burner BTUH*	Gas Type	Flow Rate**	CEC P/N	Drill Size	Inlet Pressure‡ Inches	Main Valve‡ Inches
HC-1125	100K	Natural	98 cu.ft	74278-01	0.189	7-11	3.4
HC-1125	100K	Propane	1.1 gal	74278-02	0.111	9-11	4.5
HC-2250	200K	Natural	196 cu.ft	74278-03	0.266	7-11	3.4
HC-2250	200K	Propane	2.2 gal	74278-04	0.157	9-11	4.5
HC-4500	400K	Natural	392 cu.ft	74278-05	0.377	7-11	3.4
HC-4500	400K	Propane	4.4 gal	74278-06	0.221	9-11	4.5
HC-9000	750K	Natural	735 cu.ft	74278-07	0.515	7-11	3.4
HC-9000	750K	Propane	8.2 gal	74278-08	0.382	9-11	4.5
R-5000	300,00	Natural	1,000	74278-09	N/A	7-11	3.4
R-5000	300,00	Propane	2,518	74278-10	N/A	9-11	4.5
R-10000	750,00	Natural	1,000	74278-11	N/A	7-11	3.4
R-10000	750,00	Propane	2,518	74278-12	N/A	9-11	4.5

* Fuel Energy: Natural Gas 1 Therm = 100,000 BTUH
Propane 1 Gallon = 92,500 BTUH

** Flow Rate is in BTU/Hour/Cu.Ft.

‡ Gas Pressure is in Inches of Water Column

Properties of Oil and Gas Fuels				
Fuel	Fuel Unit	Heating Value, HV net BTU/Fuel Unit	Air Required for Combustion, CR Ft. ³ / Fuel Unit	Ultimate % CO ²
Gases				
Natural Gas (Pittsburgh)	Cu. Ft.	1,021	10.58	12.1
Commercial Butane	Cu. Ft.	2,977	30.47	14
Commercial Propane	Cu. Ft.	2,371	23.82	13.7
Blast Furnace Gas	Cu. Ft.	92	0.68	25.5
Carbureted Water Gas	Cu. Ft.	508	4.6	17.2
Coke Oven Gas	Cu. Ft.	514	4.99	11.2
Mixed Coke & Carbureted Water Gas	Cu. Ft.	495	4.71	13.9
Fuel Oils				
Kerosene-Distillate	Gal.	126,000	1,230	13.3
No.1 Fuel Oil	Gal.	127,300	1,250	N/A
No.2 Fuel Oil	Gal.	131,500	1,290	13.7
No.4 Fuel Oil – Distillate or Residual	Gal.	140,600	1,370	N/A
No.5 Fuel Oil – Residual PS-300*	Gal.	141,900	1,380	13.9
No.6 Fuel Oil – PS-400*	Gal.	144,400	1,410	14.6

* Approximate oil classification

Sizing Generators & Transformers

kW and kVA to Full Load Amperage Chart
(Based on 80% Power Factor)

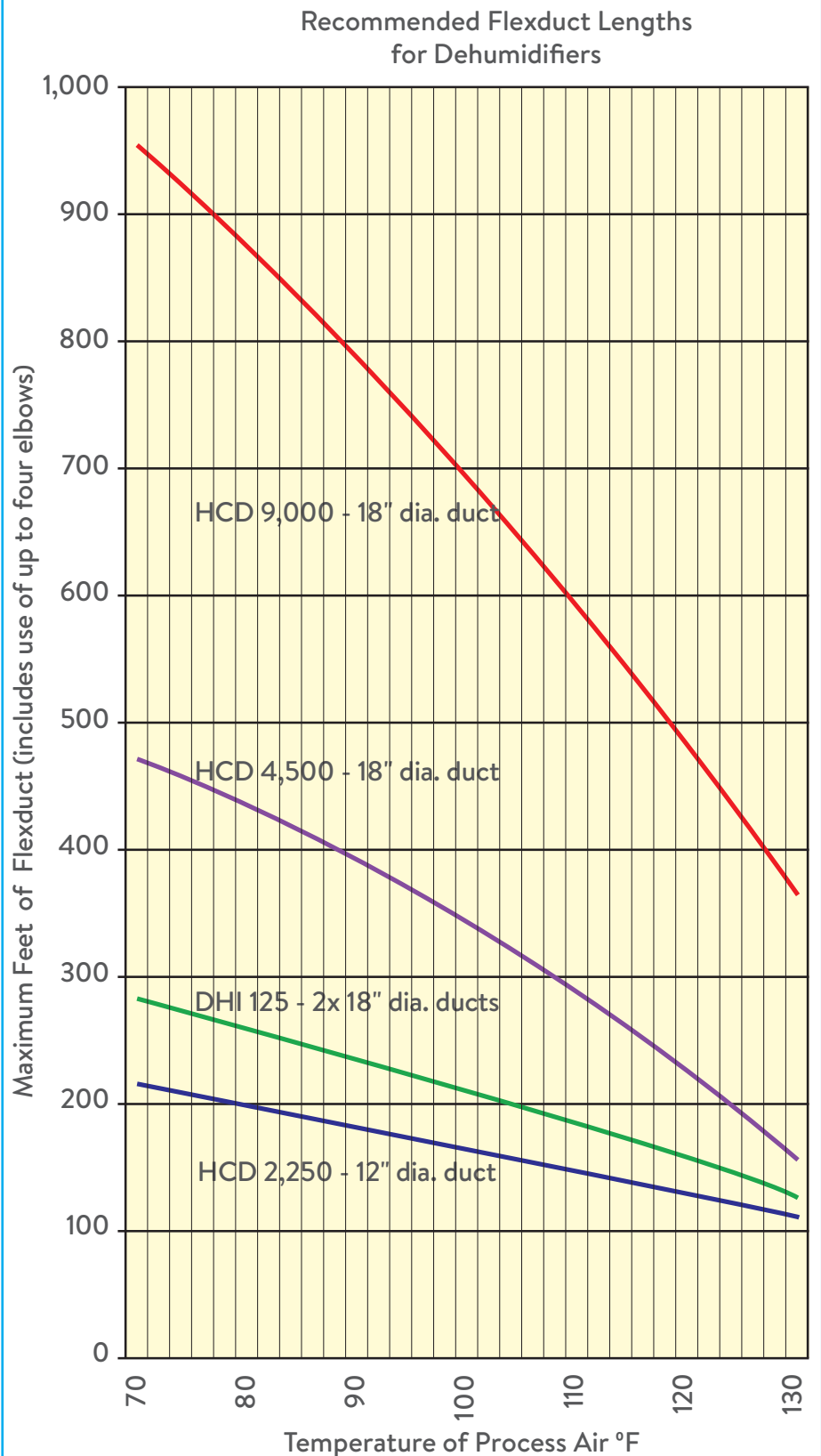
kVA	kW	208V	240V	480V
25	20	69	60	30
31	25	87	75	37
37	30	104	90	45
50	40	139	120	60
62	50	173	152	76
75	60	208	181	91
93	75	261	226	113
100	80	278	240	120
125	100	347	301	150
156	125	433	375	186
187	150	520	450	225
219	175	608	527	264
250	200	694	601	301
312	250	866	751	376
375	300	1,040	903	451
438	350	1,220	1,053	527
500	400	1,390	1,203	602
625	500	1,735	1,504	752

Notes:

1. Up-size generator by multiplying the unit's full load amp draw by 125% to accommodate start-up surge (on DX or other inductive loads) or cycling of the heaters (on desiccant units or other primarily resistive loads). At times, this 25% safety margin can be reduced for desiccant units.
2. Confirm rental rate based on 24-hour per day unlimited usage and shipping cost.
3. Estimate fuel consumption: $0.07 \times \text{kW usage} = \text{gal/hour}$. kW usage may differ from actual generator size.
4. Scheduled maintenance (oil and filter replacement) frequency—generally every 250 hours of usage.
5. Always ground the unit properly. Use 8" rod driven into the ground or approved existing ground.

Example: An HC-2250 dehumidifier that has a full load amperage rating of 66 amps@460 volts. Increasing the full load amps by 125% would equal 82.5 amps. The correct size of the generator to handle 82.5 amps @ 460 volts would be a 60kW generator.

Recommended Flexduct Lengths for Dehumidifiers



Spare Parts Information

Typical Spares Schedule

92247-01	Drive Motor 92247-01
92010-18	Motor - 1-hp
90001-13	Blower Wheel
92011-06	Motor - 2-hp
90001-27	Blower Wheel
90439-01	Temp. Switch (High Limit React) 90439-01
90476-01	Limit Switch 90476-01
10205	Enclosure (Microswitch) 10205
90217-02	Airflow Switch
P00271012	Airflow Switch
90437-01	Phase Monitor 90437-01
90437-02	Phase Monitor 90437-02
91953-02	A/B 700HRM12TA17
90033-01	A/B 700HA32A1
90089-01	A/B 9T58K0066
90028-02	A/B 100C43D10
90028-01	A/B 100A30ND3
P00181501	Telemecanique LC1D1210F7
P00181502	Telemecanique LC1D1810F7
P00181503	Telemecanique LC1D2510F7
P00181504	Telemecanique LC1D3210F6 480v
P00181550	Telemecanique LC1D3210T6
P00181606	Telemecanique LR2D1516
P00181607	Telemecanique LR2D1521
95007-04	Filter 10x20x2
95007-25	Filter 14-1/2x16-1/4x2
95007-06	Filter 12x26x2
95007-05	Filter 12x12x2
95007-07	Filter 12x33-5/8x2
95007-05	Filter 12x12x2
95007-08	Filter 20x22-3/4x2
95007-14	Filter 17-3/4x17-3/4x2
95007-09	Filter 22x30x2
95007-10	Filter 23-3/4x23-3/4x2
P01000513	Filter
P01000514	Filter
P01000515	Filter
P01000516	Filter
95007-26	Filter 15-5/8x24-3/4x2
95007-16	Filter 15-5/8x19-5/8x2
60944-02	Filter Cover
60944-03	Filter Cover
41JE52X582-11	Caster (red) 900# capacity
43461-01	Drive Assembly
43463-01	Drive Assembly
43464-01	Drive Assembly
43462-01	Drive Assembly
HMH (CECp#90485 -01)	Humidistat
91342-11	Humidistat
90548-01	OverHeat
90500-01	OverHeat
90883-01	Time Meter (Rectangular)
90435-01	Time Meter (Round)
92284-04	Sheave
92284-24	Bushing
92213-01	Minihelic
90999-02	Signal Card - Gas Burner
15061	Touch-up Paint
5H896	Touch-up Paint (Blue paint for small units)

Commonly Required Spare Parts

	Seals	Tigel Rotor	Drive Assembly	Drive Belt
HC-600	43125-02	30178-05	43461-01	92283-01
HC-1125	43125-03	30145-26	43462-01	92283-02
HC-2250	43125-04	30145-27	43463-01	92283-04
HC-4500	43125-05	30145-28	43464-01	92283-20
HC-9000	43125-06	30145-29	43465-01	92283-18
HCU-3000	92863-02	30145-202	P00910302	P03300409
HCU-6000	92863-02	30560-106	43771-01	P01000022
	Process Filter	Dimension	Quantity	Reactivation Filter
DX-30	95007-17	20x20x2	6	NA
HC-600	95007-04	10x22x2	1	95007-25
HC-1125	95007-06	12x26x2	1	95007-05
HC-2250	95007-07	12x33 5/8x2	1	95007-05
HC-4500	95007-08	20x22 3/4x2	2	95007-14
HC-9000	95007-09	22x30x2	3	95007-10
HCU-3000	95007-26	16x25x2	6	NA
HCU-6000	95007-16	16x20x2	6	NA
	95007-17	20x20x2	6	NA
Coil Module 4500	95007-26	16x25x2	1	NA
	95007-16	16x20x2	1	NA
M-10	P01000516	16x15x2	3	P01000515
M-20	P0100014	22x20x2	3	P01000513

DN-125	Drive Belt	92283-09
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Wire Sizes

HC-600	8/4 - Type W
HC-1125	8/4 - Type W
HC-2250	6/4 - Type W
HC-4500	1/4 - Type W
HC-9000	4/0-4 - Type W
15 KW	8/4 - Type W
30 KW	8/4 - Type W
64 KW	4/4 - Type W
150 KW	3/0-4 - Type W
3 Ton DX	6/4 - Type W
6 Ton DX	8/4 - Type W
12.5 Ton DX	4/4 - Type W
20 Ton DX	1/4 - Type W
30 Ton DX	1/0-4 - Type W
ProDry 1400	6/3 - Type W

Notes / Worksheet

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- Mold Remediation and Odor Control
- Commercial Loss and Catastrophic Events
- Document Cleaning, Drying and Restoration
- Emergency Response Stabilization

Polygon will manage the logistics and supply chain aspect of the equipment delivery, allowing our partners to focus on what they do best; service their customers.

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