

DanVex[®]

Catalog

DanVex



Dehumidifiers

Humidifiers





COMPANY PROFILE



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DanVex's performance is proven effective, and we provide information with integrity so consumers can make informed choices. Our company was founded in Finland. We quickly earned a reputation for high performance, technological innovation and quality design.

DanVex is a global brand with clients all over the world. Our distribution network has been further expanded both domestically and internationally. For our customers, we are a competent partner and problem solver.

Today DanVex is among the European leaders in the areas of dehumidifying, heating and new forms of energy.

Our ability to innovate was and remains the driver at DanVex. New products continue to take on ever greater importance. We have developed and produce the longest list of dehumidifiers, humidifiers. We are engaged in new technologies of electric energy storage. Our model range includes dehumidifiers with a capacity from 40 to 1000 liters per day, industrial professional dehumidifiers, pool and wall dehumidifiers, channel dehumidifiers, adsorption dehumidifiers.

Houses, stadiums, warehouses, production and processing, offices. You do not even know that everywhere you are surrounded by DanVex.

At DanVex we will continue to work in the conviction that the future is met successfully with quality assurance, first class service and unquestionable dependability.



DanVex Dehumidifier Principles

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Where moisture comes from.

Moisture enters the room from the external environment surrounding the room. Moisture enters the room from open and closed doors, windows, through walls, floor, and roof. Materials in the room, packaging, and processes release water. The greater the difference in the humidity of the air in the room and objects in contact with the air in the room will be, the more powerful will be the process of drawing moisture from the room and objects, into the air or vice versa, from air to objects, thus achieving parity.

If you read this text, then you have the task of maintaining the humidity in the room at the required level.

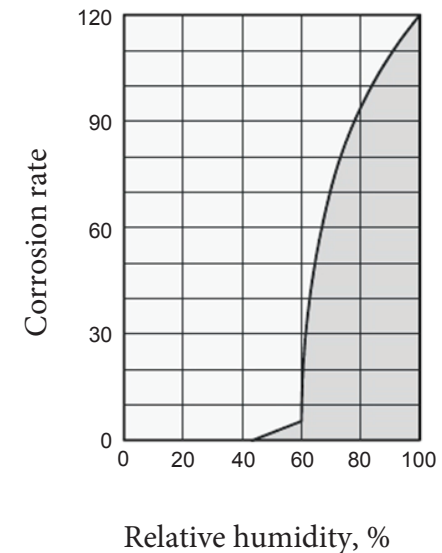
You may see the example graph of a metal corrosion rate on the right side of the page. According to the graph, the corrosion rate is negligible at a relative air humidity of a little 50%, and at an air humidity of a little 40%, you can neglect the corrosion rate at all. Nevertheless, at the relative humidity exceeding 60%, the corrosion rate increases dramatically.

This example of damage caused by moisture is applicable to many other materials, such as powder materials, packaging materials, wood, electrical equipment, and electronic devices.

There are two different approaches to achieving the required humidity inside the premise drained:

- by heating followed by air exchange,
- using air dehumidifiers.

With the right equipment, the dehumidifier consumes only about 25% of the energy consumed during “heating and ventilation.”





DanVex Dehumidifier Principles

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Relative and absolute air humidity

Ambient air is a gas mixture that always contains a certain amount of water in the form of water vapor. The maximum amount of water vapor in the air depends on its temperature and pressure.

Absolute humidity is a value showing the mass of water vapor in grams containing in 1 m³ of air.

Relative humidity reflects the current percentage of water relative to its maximum possible content at a certain temperature and pressure.

When the maximum possible amount of water is absorbed by air, air becomes “saturated” and its relative humidity is 100%. The ability of air to absorb water vapor increases with increasing temperature. Therefore, the maximum possible (absolute) water content in air increases with increasing temperature.

Temp °C	Water vapor content in g /m3 in air at humidity			
	40%	60%	80%	100%
-5	1,3	1,9	2,6	3,3
+10	3,8	5,6	7,5	9,4
+15	5,1	7,7	10,2	12,8
+20	6,9	10,4	13,2	17,3
+25	9,2	13,8	18,4	23
+30	12,9	18,2	24,3	30,3

If the air is heated, then the maximum possible amount of water vapor that can be in the air will increase. At In this case, the relative humidity will decrease, since the water vapor content will remain unchanged.

This is used when drying materials by heating. Water leaves the material into heated air and air thrown out onto the street.

While the air is cooled, the maximum possible amount of water vapor the air is gradually reduced. If the amount of water vapor remains unchanged, the relative humidity rises accordingly. When air is continuously cooled, the ability to absorb moisture by the air will gradually decrease until the air becomes saturated (100% humidity), which is equal to the maximum possible water vapor content in it. This condition is a **dew point temperature**.

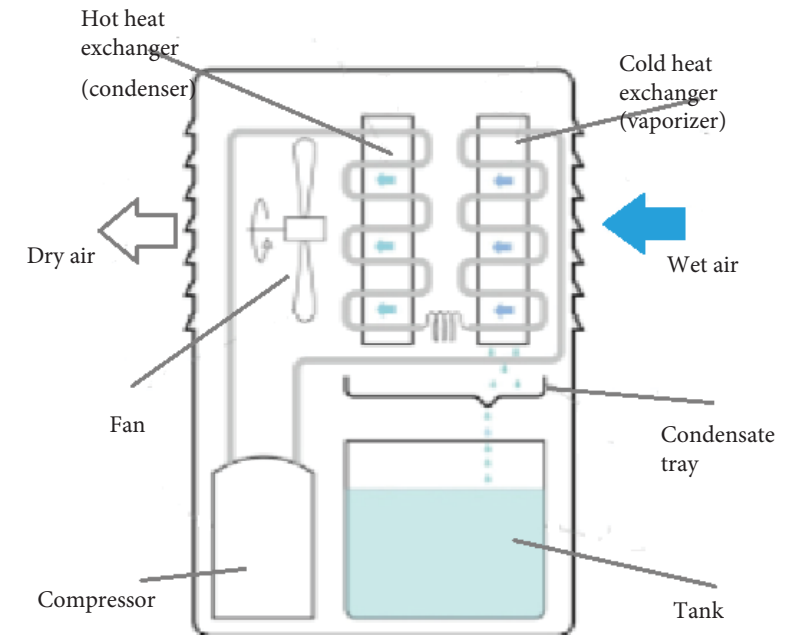
DanVex Dehumidifier Principles



When the air is cooled below the dew point temperature, the water vapor content will become higher than the maximum possible water vapor content. Excess water vapor will begin to be forced out of the air. It condenses, turning into water, and thus is extracted from the air.

In the dehumidifier, the air passes from the room through the cooling unit, reaching the dew point, the water condenses and is being removed, the air heats up to the room temperature, returning back to the room. This process takes place thanks to the freon gas compressor and accessories.

All the difficulties lie in the accurate calculation, the correct selection of components, and smart process control.



DanVex dehumidifiers is a globally recognized standard in equipment for air dehumidification being a guarantee of the performance data and reliability declared.

DEH i, DEH K Industrial series



DanVex



Most high-performance mobile industrial dehumidifiers. Best combination of performance/quality/cost/availability. Used in all fields of activity. In need to maintain humidity in the room, in most cases you should need a DanVex dehumidifier of the DEH i or DEH K series.

Storage, construction, drying, and production. Medicine, chemistry, electrical engineering, food, mining, and manufacturing industries.

Dehumidifiers of the DEH i and DEH K series are used worldwide.

Series Features

- rigid casing construction, high-quality painted metal,
- the incoming airflow and the dry airflow are separated and removed in different directions to achieve the maximum efficiency,
- friendly, most informative control panel,
- low noise,
- modern design,
- ability to connect air ducts (optional).





DEH i, DEH K Industrial series

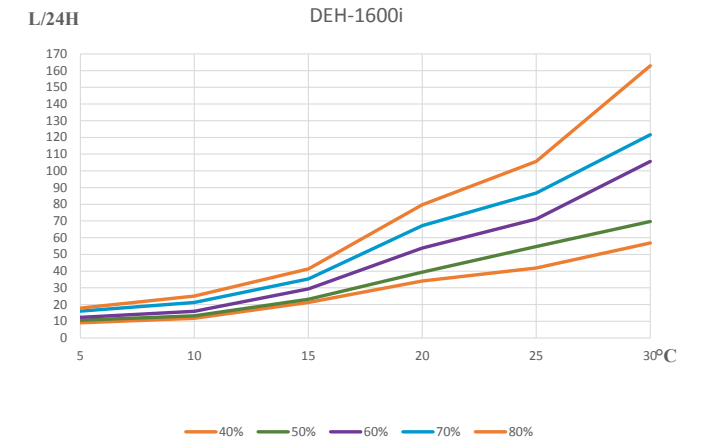
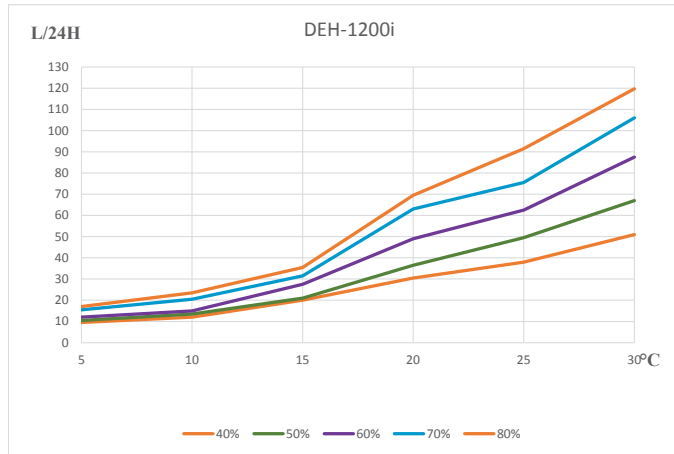
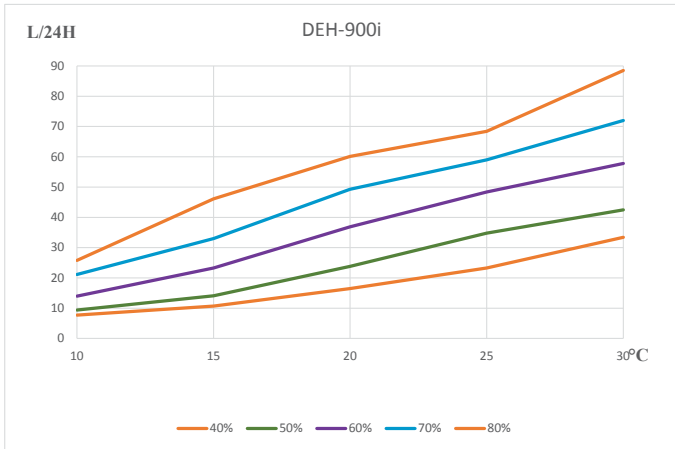
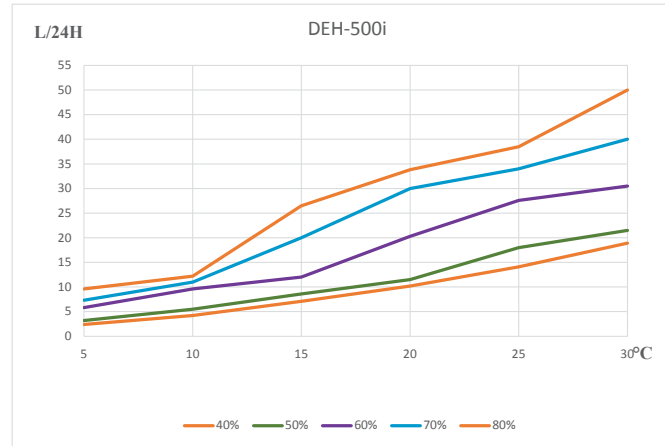
Specifications

Model	DEH-500i	DEH-900i	DEH-1200i	DEH-1600i	DEH-1900i	DEH-3K	DEH-5K	DEH-10K
Maximum capacity, L/Day (30C, 80%)	50	89	120	169	186	312	556	1027
Maximum capacity, L/Day (20C, 60%)	20,3	36,9	49	53,8	59,7	139,2	213,6	427,2
Supply airflow, m3/h	300	500	700	1150	1250	2800	5600	12000
Working range, Relative humidity,%	30-100	30-100	30-100	30-100	30-100	30-100	30-100	30-100
Customizable Relative humidity%	10-95	10-95	10-95	10-95	10-95	10-95	10-95	10-95
Operating t range, °C	+5 ...+35	+5 ...+35	+5 ...+35	+5 ...+35	+5 ...+35	+5 ...+35	+5 ...+35	+5 ...+35
Capacity of the internal condensate tank	6,5	14	14	--	--	--	--	--
Power, W	800	1150	1500	1750	2160	4250	8400	22000
Current, A	3,2	5,6	6,8	8	10	7	14	44
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz
Noise level, Db <	64	64	64	64	64	60	68	69
Refrigerant	R410a*370g	R410a*700g	R410a*1000g	R410a*1500g	R410a*1500g	R410a*1500g	R410a*1500g*2	R407c*2000g*4
Size in wooden packaging, mm, depth * width * height	495*425*750	645*575*885	645*575*885	575*715*1085	575*715*1085	460*680*1760	635*1120*1955	630*2025*2150
Size without packaging, mm, depth * width * height	410*330*550	440*430*750	440*460*760	460*600*900	460*600*900	540*760*1850	510*1030*1815	574*1925*1950
Weight with wooden packaging, kg	42.5	64.5	77.5	66	67.5	110	230	430+
Net weight, kg	34	55	62	70	75	90	200	400+

DEH i, DEH K Industrial series

Performance

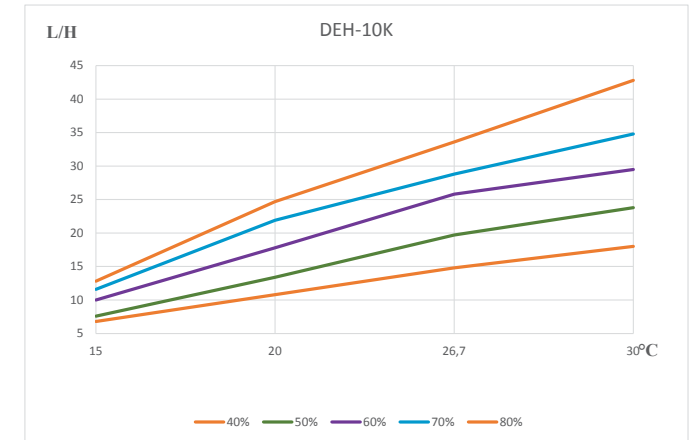
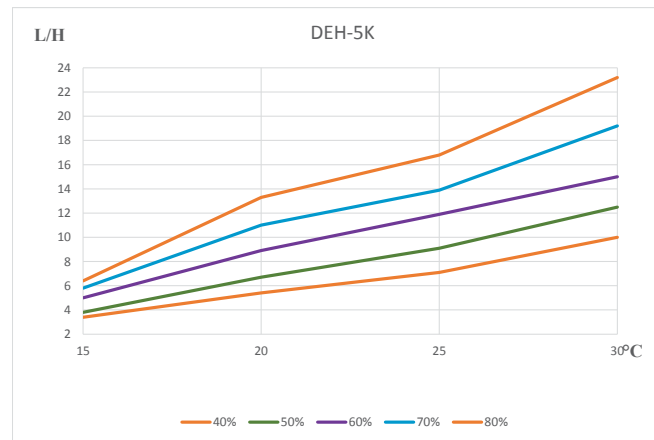
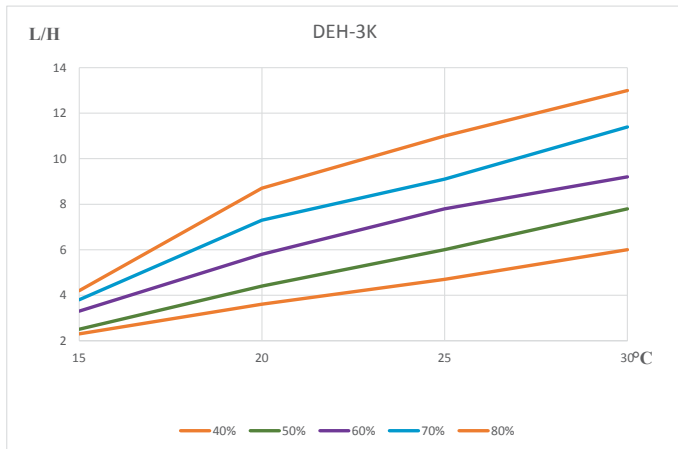
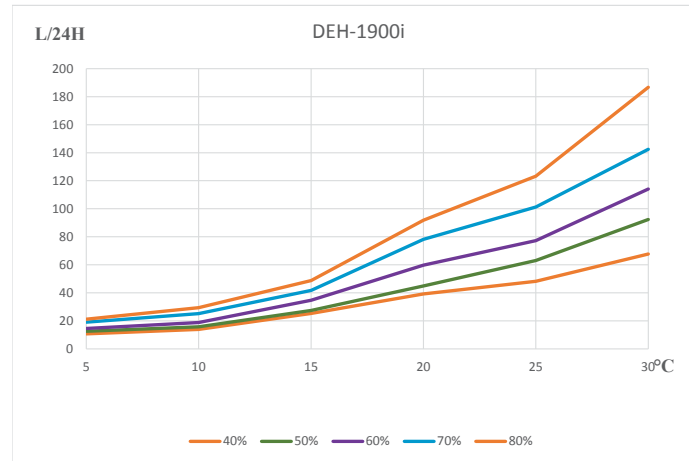
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DEH i, DEH K Industrial series

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Performance



DEH P, DEH WP Pool dehumidifiers



Dehumidifiers of the P and WP series have been designed for use in humid environments, which dehumidifiers desire fine appearance.

The most famous application is swimming pools; therefore, this series is collectively named as “For a Swimming Pool.” However, the DEH P and DEH WP are used wherever it is necessary to maintain a preset humidity level. These are residential buildings, laundries, museums, the fitness industry, libraries, churches, etc.

The P series (pool, plastic) are dehumidifiers in a plastic casing,

The WP series (wall, pool) is a nice metal casing that can be installed on the floor or suspended from the wall in a room to save space and to improve the design.

The P series is equipped with an integrated condensate drain tank. All models can drain water.



DEH P, DEH WP Pool dehumidifiers



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Features



The DEH P series features are:

- it is located in the room in any place convenient for you,
- informative and simple control panel,
- automatic control of the preset parameters of air humidity,
- heat exchangers: aluminum, copper, stainless steel,
- high-quality plastic,
- water collection into the tank or into the drain (DEH 400p, DEH 1000p, DEH 1700p),
- heating mode in older models, DEH 1200p and DEH 1700p,
- remote control (DEH 1200p, DEH 1700p).

The DEH WP distinctive features:

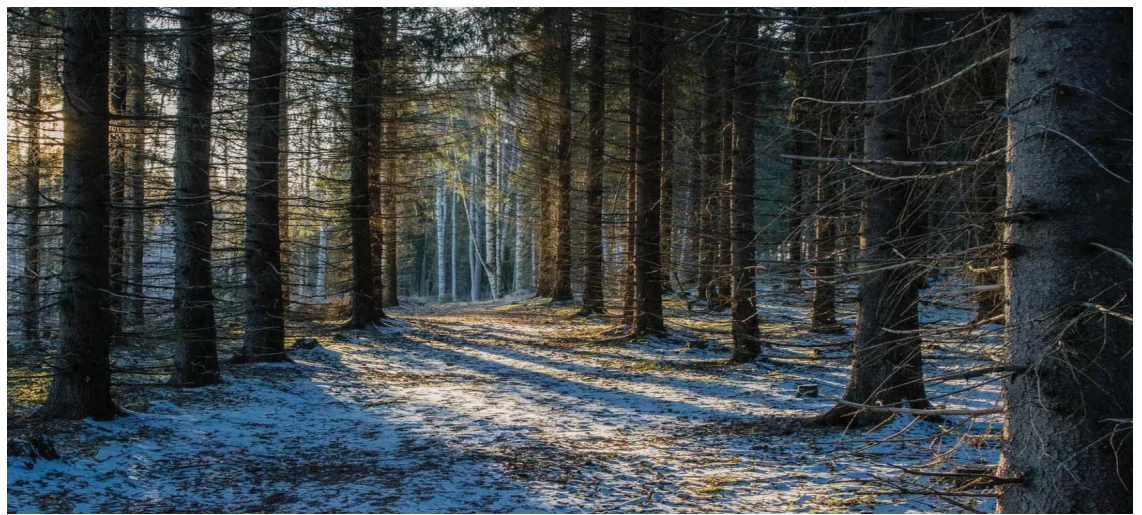
- anti-bacterial stainless steel heat exchangers,
- scheduled On/Off option of the dryer,
- continuous indication of the preset air humidity and actual air humidity,
- frame and internal structures of stainless steel,
- powder coated steel casing,
- built-in clock,
- fasteners for wall mounting in the kit,
- remote control panel.

The operating modes:

- using the built-in humidity sensor,
- continuous operation,
- vent mode.



DEH P, DEH WP Pool dehumidifiers



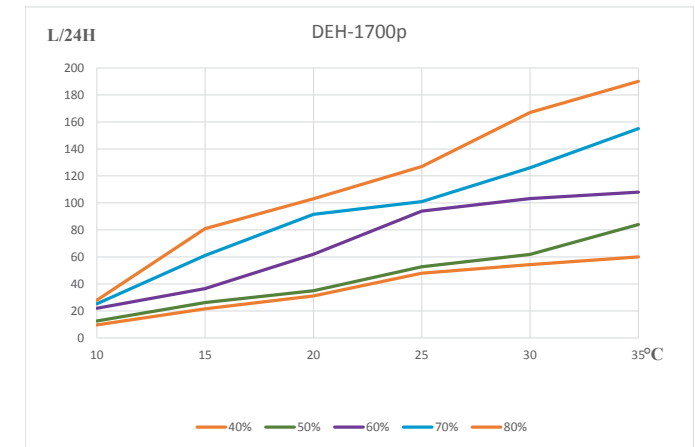
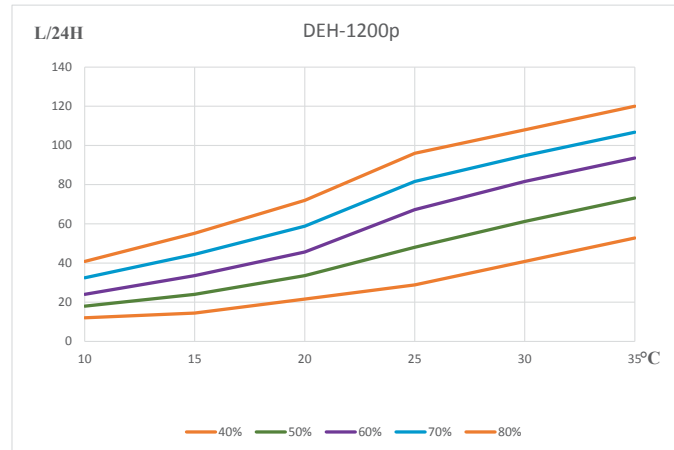
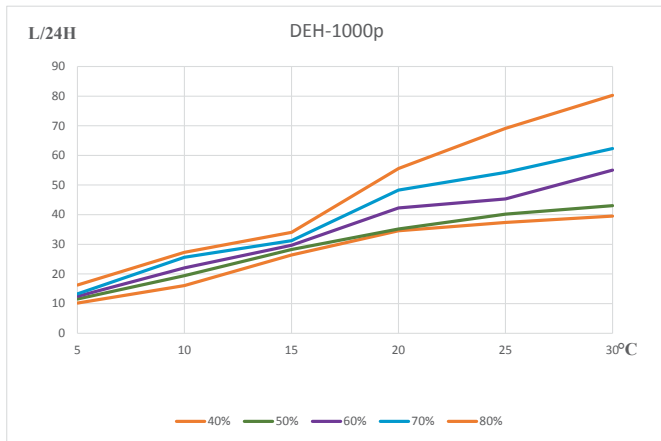
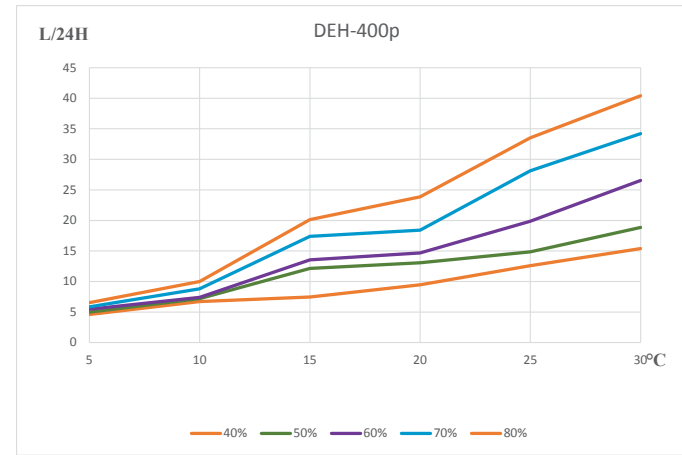
Specifications

Model	DEH-400p	DEH-1000p	DEH-1200p	DEH-1700p	DEH-600wp	DEH-1000wp	DEH-1700wp	DEH-2000wp
Maximum capacity, L/Day (30C, 80%)	40	80	108	168	60	100	170	200
Maximum capacity, L/Day (20C, 60%)	14,7	41,4	45,6	62	21,6	32,9	54,1	65,5
Supply airflow, m3/h	420	450	850	850	450	500	850	1100
Operating t range, °C	+5 ...+35	+5 ...+35	+5 ...+32	+5 ...+32	+5 ...+35	+5 ...+35	+5 ...+35	+5 ...+35
Capacity of the internal condensate tank	7,2	7,2	-	5	-	-	-	-
Remote control	-	-	+	+	+	+	+	+
Power, W	700	1350	1300	1650	920	1260	1610	1950
Current, A	3,2	5,3	5,8	7,4	4,3	6	6,8	8
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz
Noise level, Db <	42	42	48	48	46	48	46	48
Refrigerant	R410	R410	R410	R410	R410	R410	R410	R410
Size in wooden packaging, mm, depth * width * height	335*515*670	335*515*670	455*565*1930	470*565*1930	350*840*800	350*990*800	380*1470*800	380*1470*800
Size without packaging, mm, depth * width * height	230*440*630	230*440*630	350*530*1735	410*530*1735	270*760*710	270*920*710	280*1410*690	280*1410*690
Weight with wooden packaging, kg	22	26	66	80	56,5	69	100	105
Net weight, kg	20,5	24,5	49	67	44	54	75	80

DEH P, DEH WP Pool dehumidifiers



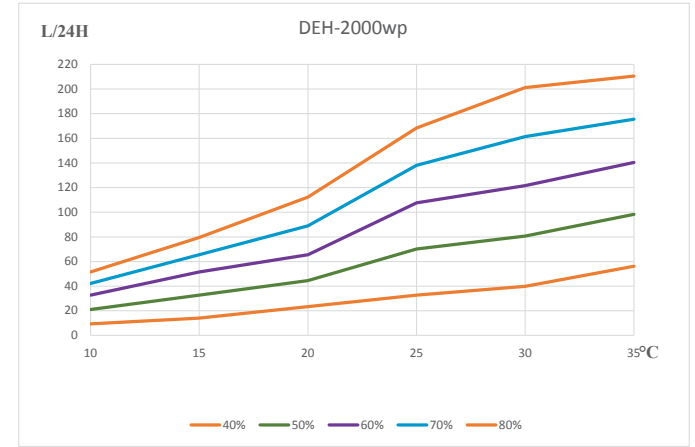
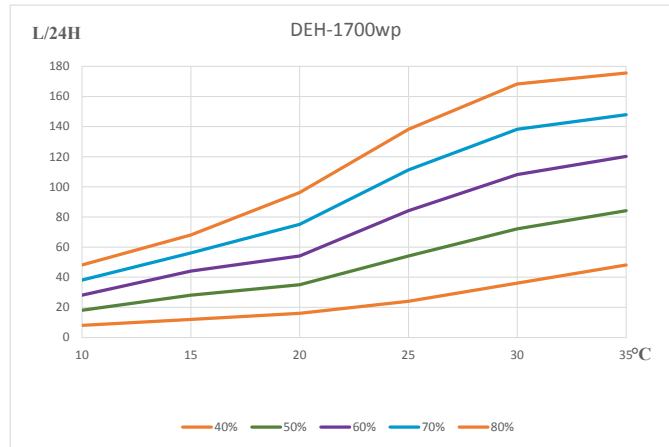
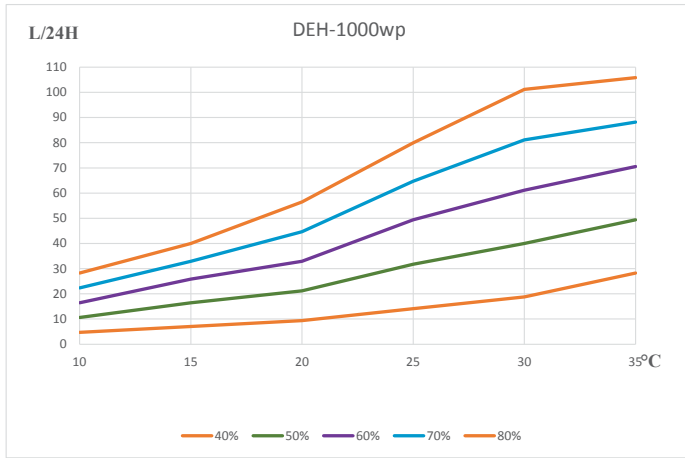
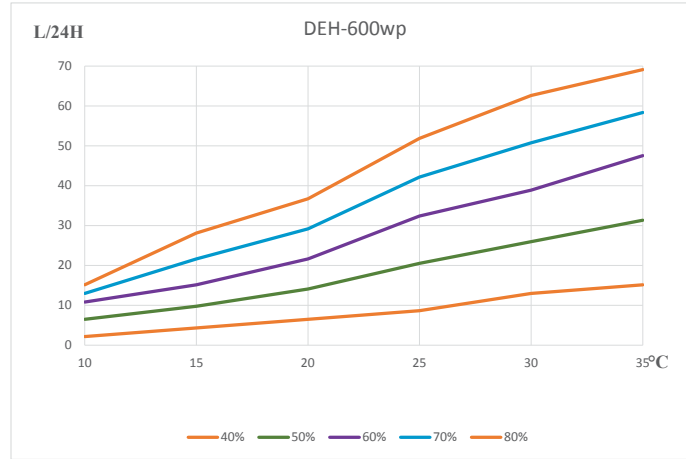
Performance



DEH P, DEH WP Pool dehumidifiers



Performance

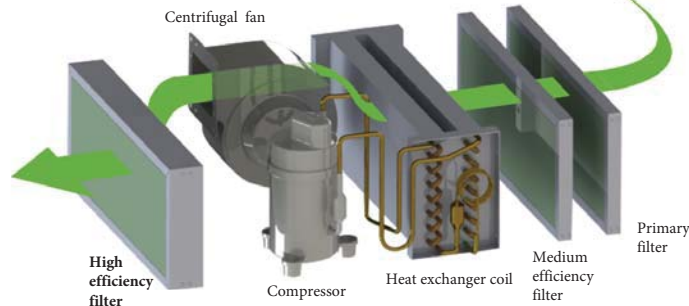


DD Series Ducted Single Flow Dehumidifier with Air Purifying System

DanVex



Working principle



This series of dehumidification system will first capture the indoor air to pass through the filters of the first stage (G4 efficiency) and the second stage (F7 efficiency) to remove airborne particles and contaminants.

The filtered air will then pass through the dehumidification system to remove the excess moisture. The excess moisture in the air will be condensate and turn into water.

The water will then be collected at a drain pan, where it will be pushed out with the help of positive air pressure from the processed air.

The dried air will then pass through the final stage of HEPA filter to remove micron size particles and airborne bacteria. The final output air will be cleaned and dried.

The same process will continue to work until the ambient air reach to the set-point of the desire humidity level.

This system is suitable for the area that is enclosed and not requires introducing fresh air, for example like warehouses, storage and equipment rooms that require keeping the room constantly dry at all times.

Product Features

- The body material is made of cold-rolled sheet metal with epoxy powder coating.
- A mini measuring level stucked on the bottom side of the unit, which can help to keep the balance during installation.
- An electric heater can be mounted in the air outlet duct for further heating of the dry air.
- Built-in Centralized Air Fan with self-balancing function to exhaust excessive moisture from the indoor ambient air.
- Condensate trap does not need to install because of the positive pressure drainage design. This helps to save more space during installation.
- Evaporator and Condenser are epoxy-coated for better durability and corrosion resistance. It is washable for maintenance service.
- Blue hydrophilic-coated aluminum heat exchanger coils and SS304 condensate drain pan is made of preventing corrosion damage. The wall thickness of the copper tubes of the heat exchanger is 0.5 mm, of curved copper tubes of 0.75-1 mm. This significantly increases the life of DanVex.
- The machine is built for 24/7 operation with automatic dehumidification and positive pressure drainage.
- Low Noise, High Static Pressure, Double Speed Centrifugal Fan, which allow fan speed adjustment.
- Purifying spare parts replacement is mandatory. It can better improve the air quality and the machine's service life.
- Air Purifying section integrated into the system (Medium Efficiency Filter, UV Sterilizing Lamp and Negative Ionizer).
- The machine uses name-brand compressor Panasonic, Mitsubishi, Daikin, Embraco with eco-friendly R410A or R134A refrigerant.
- The hinged side panel design ensures easy access to the internals for maintenance.
- The machine can be connected and monitored with RS485 serial port and Wi-Fi App.
- LCD controller (integrated with temperature & humidity sensor) simplifies complex wiring and installation.

DD Series

Ducted Single Flow Dehumidifier with Air Purifying System

Specification



Drain pan	SUS304, stainless steel
Controller	LCD, push-button, RS485 (MODBUS); Wi-fi
Operating t range, °C	5 -38
Condenser	thick copper tubes (0,5-0,75-1mm) with blue hydrophilic-coated aluminum fins
Filters	G4 + F7, Anion generator, UV light

Model	DD - 26	DD - 36	DD - 56	DD - 96	DD - 136	DD - 168	DD - 240	DD - 380	DD - 480	DD - 720	DD - 960
Maximum capacity, L/Day (30C, 80%)	28	40	60	100	140	180	250	380	500	750	1000
Maximum capacity, L/Day (20C, 60%)	13	17	27	39	40	50	75	110	150	210	300
Supply airflow, m3/h	280-350	500-670	650-780	1000-1200	1200-1350	1800-2200	2500-2900	3500-3850	4800-5300	7500-9000	9000-11000
Return airflow, m3/h	280-350	500-670	650-780	1000-1200	1200-1350	1800-2200	2500-2900	3500-3850	4800-5300	7500-9000	9000-11000
Static Pressure Pa	100	100	100	100	100	200	200	200	200	400	400
Power, W	400	620	700	920	1160	2800	4000	5500	9000	15000	21000
Current, A	1,8	2,8	3,3	4,3	5,4	5,4	7	10	16	26	37
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	380/50Hz	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz
Noise level, Db <	35	45	45	45	45	55	55	55	55	55	55
Compressor	Embraco	Embraco	Embraco	Panasonic	Panasonic	Mitsubishi	Daikin	Mitsubishi	Daikin	Mitsubishi	Daikin
Refrigerant	134A	134A	134A	410A	410A	410A	410A	410A	410A	410A	410A
Drain hole size, DN	20	20	20	20	20	32	32	32	32	32	32
Return air duct, mm	100	150	150	200	200	500x400	500x400	750x450	750x450	1200x450	1200x450
Supply air duct, mm	100	150	150	200	200	350x350	350x350	818x313	818x313	1058x348	1058x348
Size, mm	830x433x285	950x539x265	950x539x265	1030x639x375	1030x639x375	1160x820x600	1160x820x600	1370x1120x720	1370x1120x720	1700x1642x720	1700x1642x720
Weight, kg	40	45	47	68	71	119	146	270	300	500	560

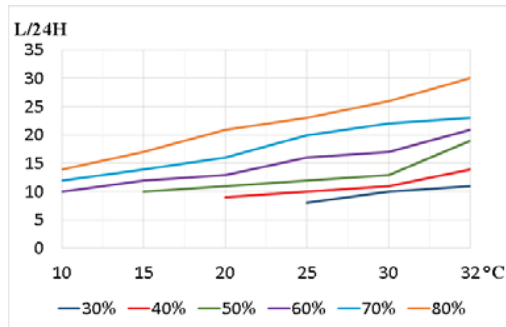
DD Series

Ducted Single Flow Dehumidifier with Air Purifying System

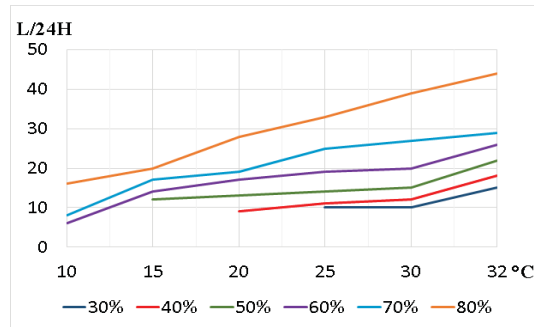
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Performance

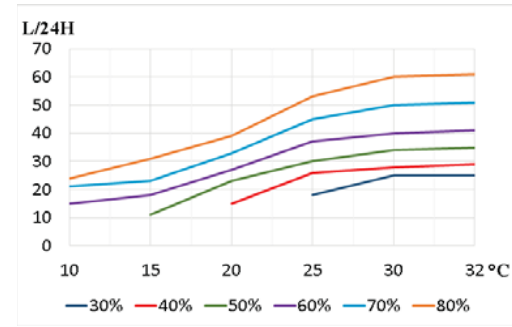
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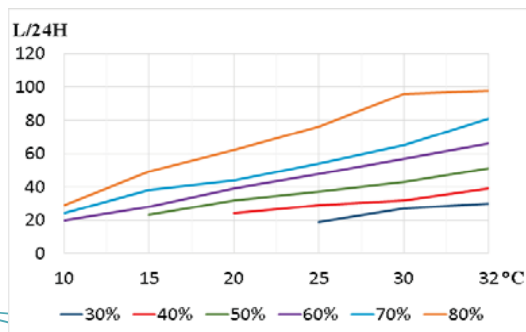
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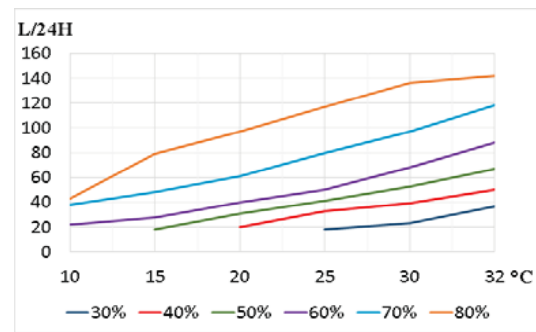
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DD - 96



DD - 136



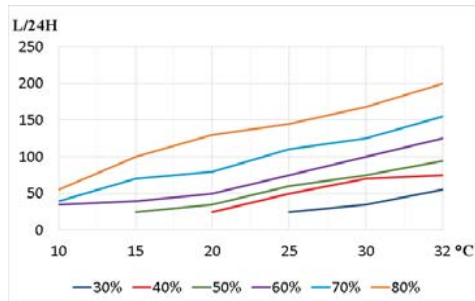
DD Series

Ducted Single Flow Dehumidifier
with Air Purifying System

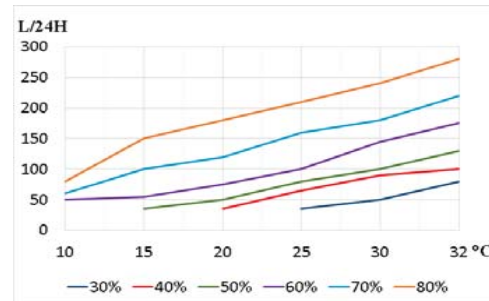


Performance

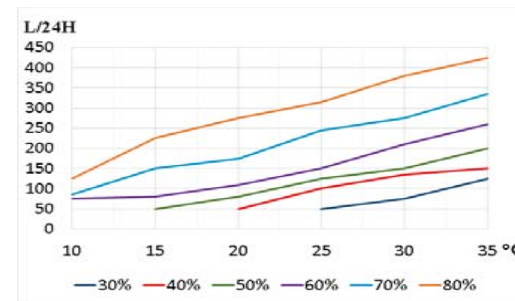
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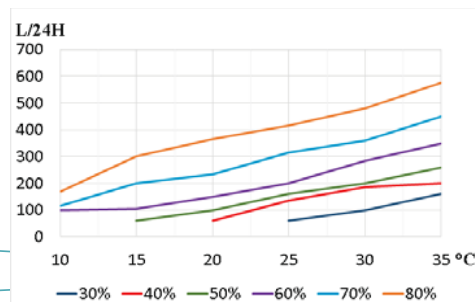
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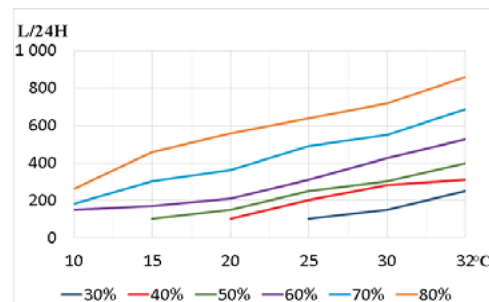
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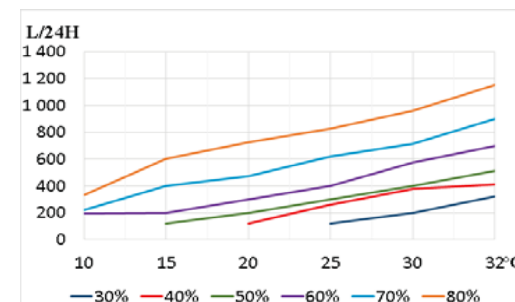
DD - 480



DD - 720

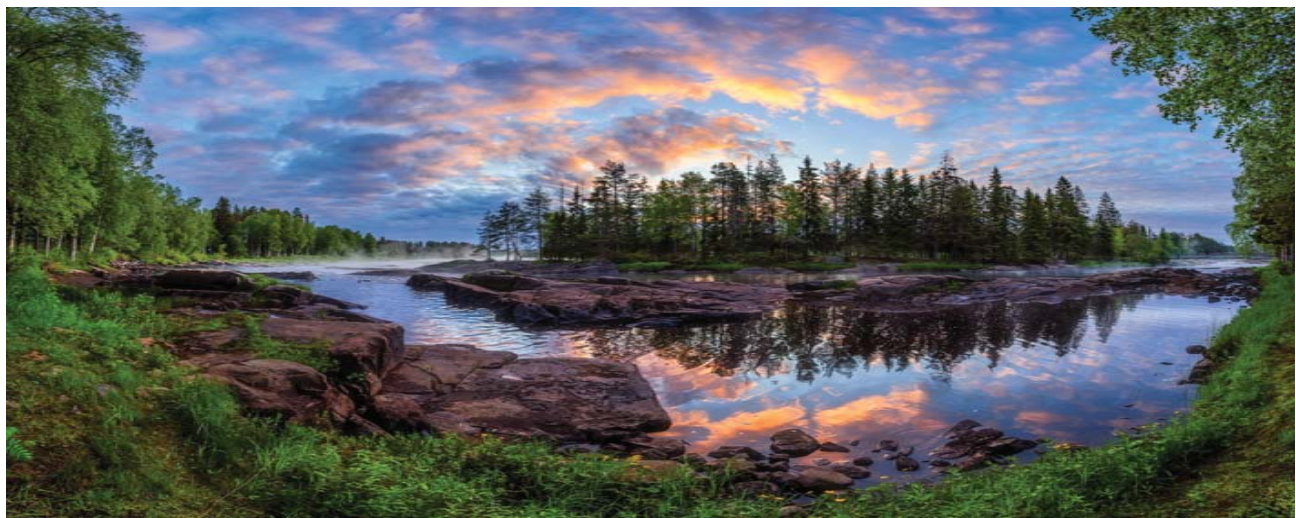


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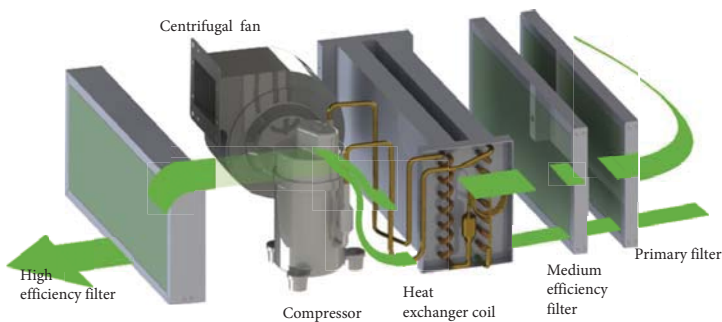


DD-F Series

Ducted Whole-house Dehumidifier with Fresh Air System and HEPA



Working principle



This system introduces partial fresh air from outdoor and mixes with the indoor return air.

The dehumidifier will first capture air from indoor and fresh air from outside, mix them.

The mixed air will then pass through the filters of the first stage (G4 efficiency) and the second stage (F7 efficiency) to remove airborne particles and contaminants. The filtered air will then pass through the dehumidification system to remove the excess moisture. The excess moisture in the air will be condensate and turn into water. The water will then be collected at a drain pan, where it will be pushed out with the help of positive air pressure inside the system.

The dried air will then pass through the final stage of HEPA filter to remove micron size particles and airborne bacteria.

The final output air will be cleaned and dried. The same process will continue to work until the ambient air reaches the set-point of the desire humidity level.

This system is suitable for application that required the introduction of fresh air into the room and also that require creating positive air pressure in the room. This dehumidifier can also be the replacement of the traditional ventilation fan that is used to keep the room filled with fresh air.

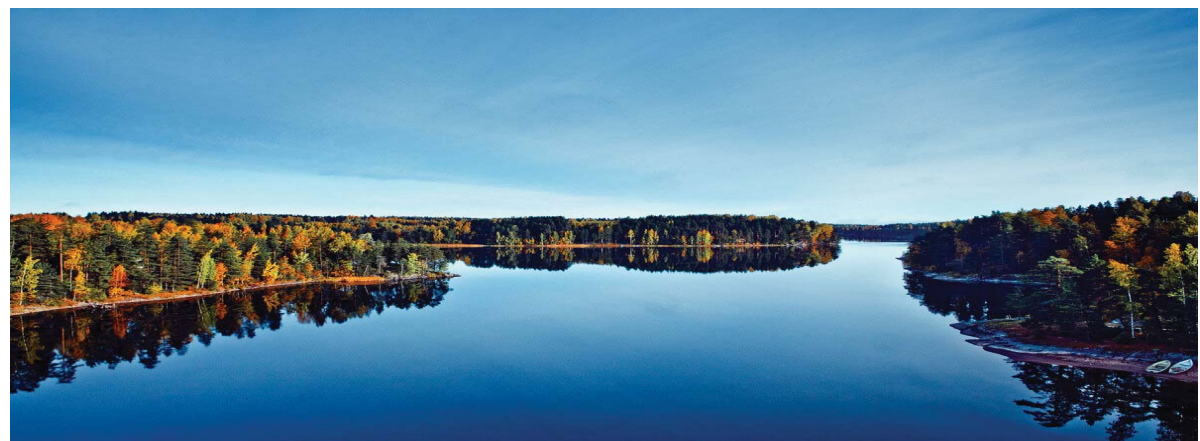
The system of supply of fresh air would help to prevent issues that may affect the well-being of occupants due to lack of oxygen. Besides, it also helps to reduce the growth of airborne bacteria with the built-in air purification, ensuring a continuous supply of fresh, clean and dry air is supplied into the room.

DD-F Series

Ducted Whole-house Dehumidifier with Fresh Air System and HEPA

DanVex

Product Features



- The body material is made of cold-rolled sheet metal with epoxy powder coating.
- A mini measuring level stuck on the bottom side of the unit, which can help to keep the balance during installation.
- An electric heater can be mounted in the air outlet duct for further heating of the dry air.
- Built-in Centralized Air Fan with self-balancing function to exhaust excessive moisture from the indoor ambient air.
- Condensate trap does not need to install because of the positive pressure drainage design. This helps to save more space during installation.
- Evaporator and Condenser are epoxy-coated for better durability and corrosion resistance. It is washable for maintenance service.
- Blue hydrophilic-coated aluminum heat exchanger coils and SS304 condensate drain pan is made of preventing corrosion damage. The wall thickness of the copper tubes of the heat exchanger is 0.5 mm, of curved copper tubes of 0.75-1 mm. This significantly increases the life of DanVex..
- The machine is built for 24/7 operation with automatic dehumidification and positive pressure drainage.
- Low Noise, High Static Pressure, Double Speed Centrifugal Fan, which allow fan speed adjustment.
- Purifying spare parts replacement is mandatory. It can better improve the air quality and the machine's service life.
- Air Purifying section integrated into the system(Medium Efficiency Filter, HEPA Filter, Activated Carbon Filter (option), UV Sterilizing Lamp and Negative Ionizer).
- The machine uses name-brand compressor Panasonic, Mitsubishi, Daikin, Embraco with eco-friendly R410A or R134A refrigerant.
- The hinged side panel design ensures easy access to the internals for maintenance.
- The machine can be connected and monitored with RS485 serial port and Wi-Fi App.
- LCD controller (integrated with temperature & humidity sensor) simplifies complex wiring and installation.

DD-F Series

Ducted Whole-house Dehumidifier with Fresh Air System and HEPA

Specification



DanVex

Drain pan	SUS304, stainless steel
Controller	LCD, push-button, RS485 (MODBUS); Wi-fi
Operating t range, °C	5 -38
Condenser	thick copper tubes (0,5-0,75-1mm) with blue hydrophilic-coated aluminum fins
Filters	G4 + F7+H13, Anion generator, UV light

Model	DD - 26F	DD - 36F	DD - 56F	DD - 96F	DD - 136F	DD - 168F	DD - 240F	DD - 380F	DD - 480F	DD - 720F	DD - 960F
Maximum capacity, L/Day (30C, 80%)	28	40	60	100	140	180	250	380	500	750	1000
Maximum capacity, L/Day (20C, 60%)	13	17	27	39	40	50	75	110	150	210	300
Supply airflow, m3/h	280-350	500-670	650-780	1000-1200	1200-1350	1800-2200	2500-2900	3500-3850	4800-5300	7500-9000	9000-11000
Return airflow, m3/h	140-175	350-460	470-550	680-800	750-850	1200-1450	1850-2050	2600-2850	3550-3900	5500-6500	6800-8100
Fresh airflow, m3/h	140-175	150-210	180-230	320-400	400-500	600-750	650-850	900-1000	1250-1450	2000-2500	2200-2900
Static Pressure Pa	100	100	100	100	100	200	200	200	200	400	400
Power, W	420	670	740	1050	1300	3000	4200	6600	10000	17000	23500
Current, A	1,9	3	3,5	4,9	6,2	5,4	7,5	11,8	18	30	40
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz	380V/50Hz
Noise level, Db <	35	45	45	45	45	55	55	55	55	55	55
Compressor	Embraco	Embraco	Embraco	Panasonic	Panasonic	Mitsubishi	Daikin	Mitsubishi	Daikin	Daikin	Daikin
Refrigerant	134A	134A	134A	410A	410A	410A	410A	410A	410A	410A	410A
Drain hole size, DN	20	20	20	20	20	32	32	32	32	32	32
Fresh air duct, mm	100	100	100	150	150	230x230	230x230	280x280	280x280	320x320	320x320
Return air duct, mm	100	150	150	200	200	300x350	300x350	460x460	750x450	1200x450	1200x450
Supply air duct, mm	100	150	150	200	200	350x350	350x350	818x313	818x313	1058x348	1058x348
Size, MM	830x433x285	950x539x265	950x539x265	1030x639x375	1030x639x375	1160x820x600	1160x820x600	1370x1120x720	1370x1120x720	1700x1642x720	1700x1642x720
Weight, kg	45	50	55	75	78	125	156	286	310	528	585

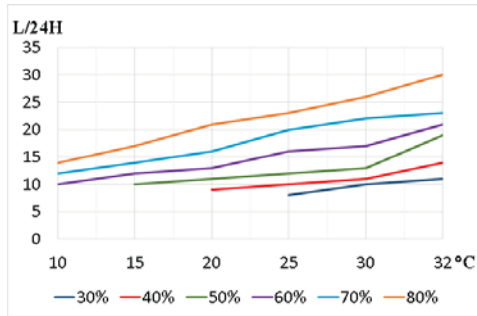
DD-F Series

Ducted Whole-house Dehumidifier with Fresh Air System and HEPA

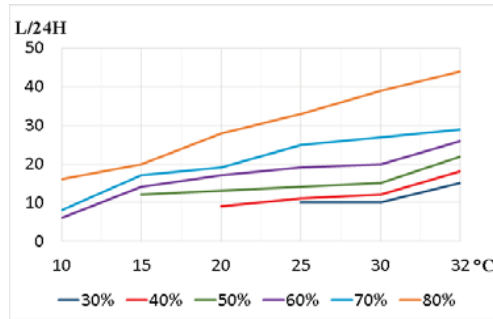


Performance

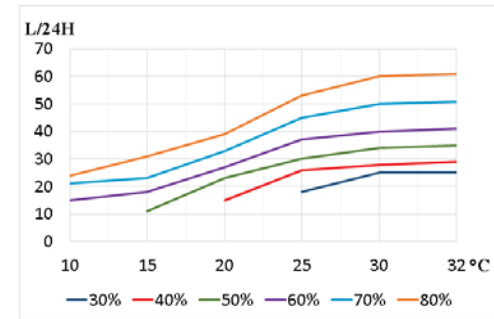
DD - 26F



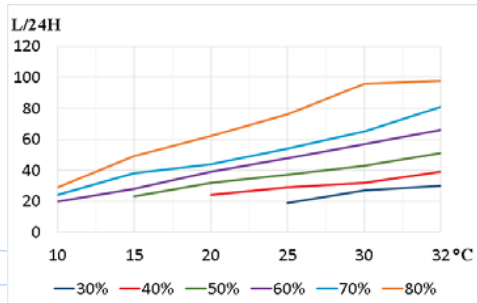
DD - 36F



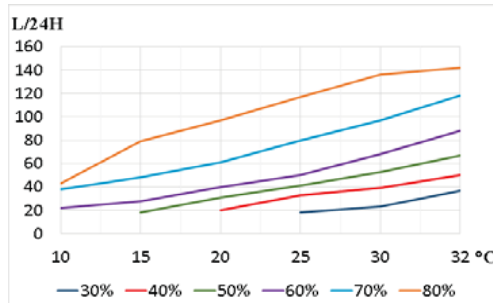
DD - 56F



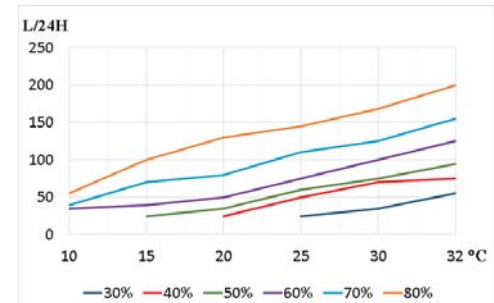
DD - 96F



DD - 136F



DD - 168F



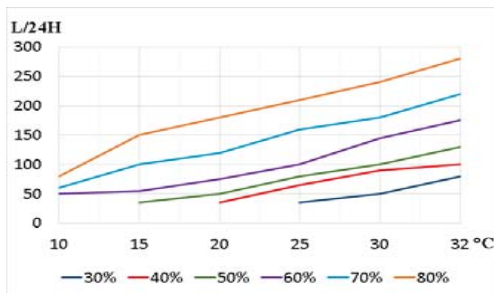
DD-F Series

Ducted Whole-house Dehumidifier
with Fresh Air System and HEPA

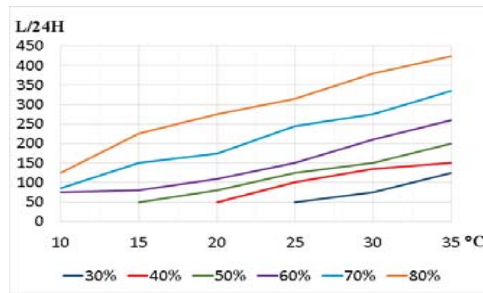
DanVex

Performance

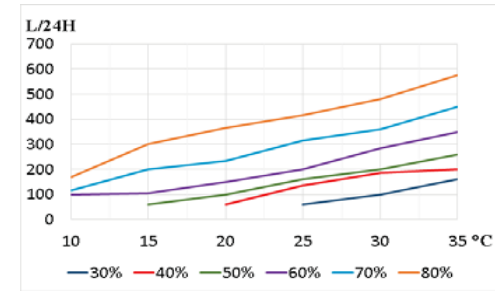
DD - 240F



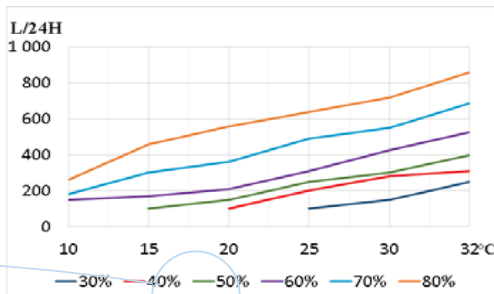
DD - 380F



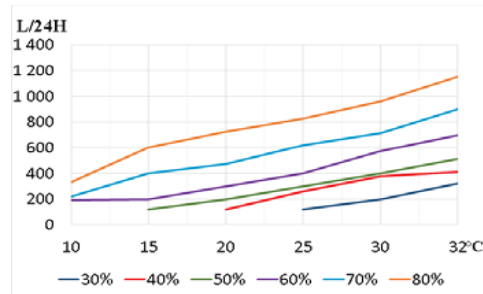
DD - 480F



DD - 720F



DD - 960F



DD-FSR Series

Ducted Double Flow Heat Recovery
Dehumidifier with HEPA Air Purifying System



Working principle

This system combines high-efficiency heat recovery to dehumidification.

The dehumidifier will first draw in fresh air from outdoor and direct through the first stage (G5 efficiency) and second stage (F7 efficiency) filtration and after direct to pass through the air heat exchanger (heat recovery). This heat exchanger is before entering into the dehumidification system.

At the same time, the second fan of the dehumidifier will draw in exhaust air from indoor and direct part of them to pass through this heat exchanger. These airflows do not mix but transfer heat to each other in the heat exchanger. Thus, fresh air receives the temperature of the exhaust air.

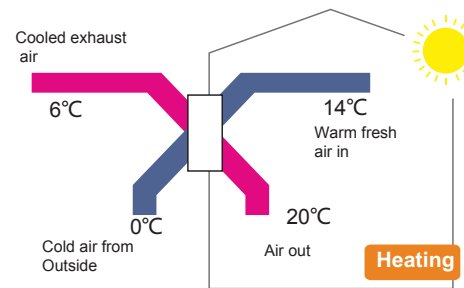
After that, this exhaust air is blown outside, fresh air mix with part of air from indoor and enters into the dehumidification system. The dried air is supplied into the room through the HEPA filter.

This is a great way to improve the quality of humid indoor air by introducing outside air while saving much of the energy from exhaust air.

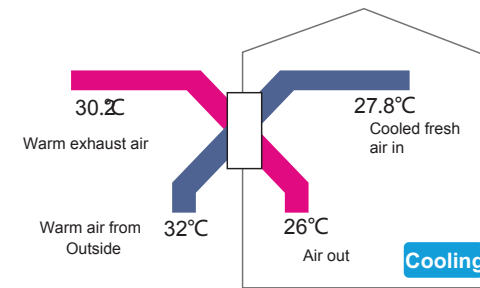


Heat Recovery Concept

Operation in winter



Operation in summer



winter: indoor supply air $t = (\text{indoor } t - \text{outdoor } t) \times \text{exchange efficiency}(\%) + \text{outdoor } t$
 summer: indoor supply air $t = \text{outdoor } t - (\text{outdoor } t - \text{indoor } t) \times \text{exchange efficiency}(\%)$

Winter: calculation example: $(20^\circ - 0^\circ) \times 70\% + 0^\circ = 14^\circ$
 Summer: calculation example: $32^\circ - (32^\circ - 26^\circ) \times 70\% = 27.8^\circ$



DD-FSR Series

Ducted Double Flow Heat Recovery
Dehumidifier with HEPA Air Purifying System



Product features



- The body material is made of cold-rolled sheet metal with epoxy powder coating.
- A mini measuring level stuck on the bottom side of the unit, which can help to keep the balance during installation.
- An electric heater can be mounted in the air outlet duct for further heating of the dry air.
- Built-in Centralized Air Fan with self-balancing function to exhaust excessive moisture from the indoor ambient air.
- Condensate trap does not need to install because of the positive pressure drainage design. This helps to save more space during installation.
- Evaporator and Condenser are epoxy-coated for better durability and corrosion resistance. It is washable for maintenance service.
- Blue hydrophilic-coated aluminum heat exchanger coils and SS304 condensate drain pan is made of preventing corrosion damage. The wall thickness of the copper tubes of the heat exchanger is 0.5 mm, of curved copper tubes of 0.75-1 mm. This significantly increases the life of DanVex.
- The machine is built for 24/7 operation with automatic dehumidification and positive pressure drainage.
- Low Noise, High Static Pressure, Double Speed Centrifugal Fan, which allow fan speed adjustment.
- Purifying spare parts replacement is mandatory. It can better improve the air quality and the machine's service life.
- Air Purifying section integrated into the system (Medium Efficiency Filter, HEPA Filter, Activated Carbon Filter (option), UV Sterilizing Lamp and Negative Ionizer).
- The machine uses name-brand compressor Panasonic, Mitsubishi, Daikin, Embraco with eco-friendly R410A or R134A refrigerant.
- The hinged side panel design ensures easy access to the internals for maintenance.
- The machine can be connected and monitored with RS485 serial port and Wi-Fi App.
- LCD controller (integrated with temperature & humidity sensor) simplifies complex wiring and installation.
- Cross exchanger heat recovery core is made of hydrophilic coating aluminum foil with high efficiency of 70%.
- Air exchanger is designed with a streamline to effectively prevent dust, eliminating the need for periodic cleaning exchanger core.
- The original patented design allows supply air temperature almost the same as indoor air temperature which can help to save energy.
- Positive pressure design or negative pressure version both available based on clients' requirements.

DD-FSR Series

Ducted Double Flow Heat Recovery Dehumidifier with HEPA Air Purifying System

Specification

Drain pan	SUS304, stainless steel
Controller	LCD, push-button, RS485 (MODBUS); Wi-fi
Operating t range, °C	5 -38
Condenser	thick copper tubes (0,5-0,75-1mm) with blue hydrophilic-coated aluminum fins
Filters	G4 + F7+H13+F7, Anion generator, UV light



Model	DD - 26FSR	DD - 36FSR	DD - 56FSR	DD - 96FSR	DD - 136FSR	DD - 168FSR	DD - 240FSR
Maximum capacity, L/Day(30C, 80%)	28	40	60	100	140	180	250
Maximum capacity, L/Day (20C, 60%)	13	17	27	39	40	50	75
Supply airflow, m3/h	320-420	650-780	730-850	1000-1200	1200-1380	1800-2200	2500-2900
Fresh airflow, m3/h	100-150	180-250	280-360	430-550	580-720	600-750	850-1000
Return airflow, m3/h	220-420	400-780	450-850	570-1200	770-1380	1200-2200	1650-2900
Exhaust airflow, m3/h	80	120	200	300	420	550	750
Static Pressure Pa	100	150	150	150	150	150	150
Power, W	550	720	850	1100	1380	3300	5500
Current, A	2,5	3,2	3,7	5	6,2	8	9,3
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	380V/50Hz	380V/50Hz
Noise level, Db <	35	45	45	45	45	60	60
Compressor	Embraco	Embraco	Embraco	Embraco	Embraco	Mitsubishi	Daikin
Refrigerant	134A	134A	134A	134A	134A	410A	410A
Drain hole size, DN	20	20	20	20	20	20	20
Fresh air duct, mm	150	150	150	200	200	350x350	350x350
Return air duct, mm	150	150	150	200	200	350x350	350x350
Supply air duct, mm	150	150	150	200	200	350x350	350x350
Exhaus air duct, mm	150	150	150	200	200	350x350	350x350
Size, mm	1205x699x283	1205x699x283	1205x699x283	1330x749x325	1330x749x325	1830x1149x620	1830x1149x620
Weight, kg	55	60	68	85	92	150	170



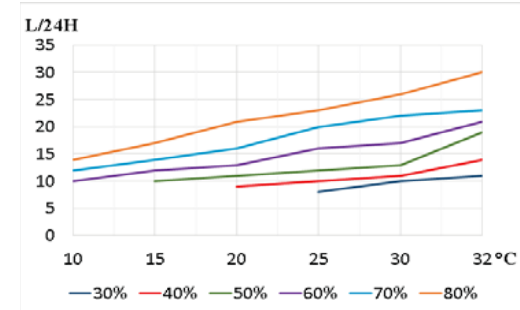
DD-FSR Series

Ducted Double Flow Heat Recovery Dehumidifier with HEPA Air Purifying System

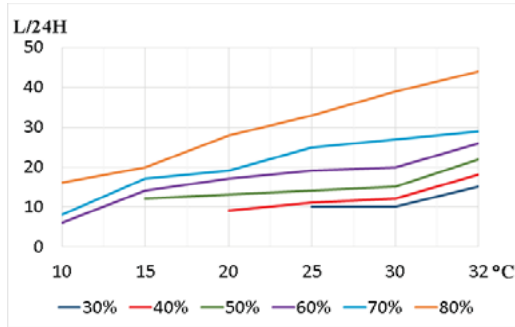
DanVex

Performance

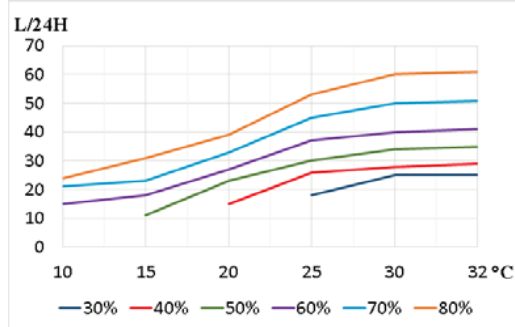
DD - 26FSR



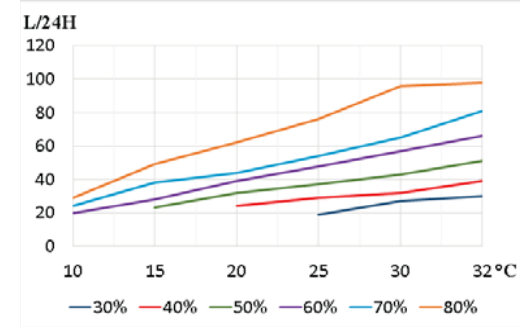
DD - 36FSR



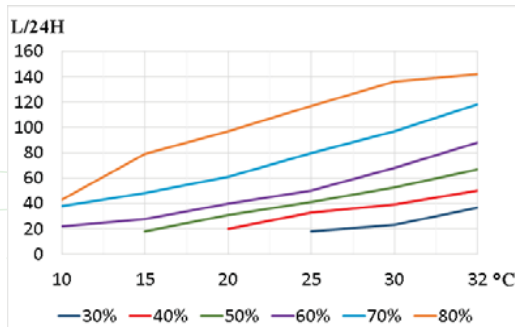
DD - 56FSR



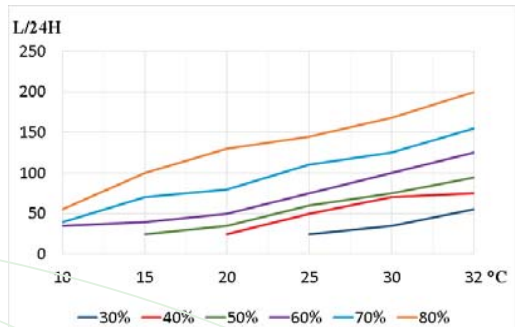
DD - 96FSR



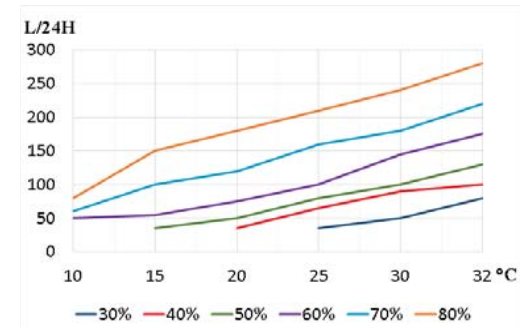
DD - 136FSR



DD - 168FSR



DD - 240FSR



DD-FS Series

Ducted Double Flow Dehumidifier with HEPA Air Purifying System



DanVex

Working principle

This system is the introduction of fresh, dry and cleaned air indoor, helps to solve the issue of humid and muggy air.

The dehumidifier will first draw in fresh air from outdoor and direct the air to pass through the first stage (G5 efficiency) and second stage (F7 efficiency) filtration before entering into the dehumidification system.

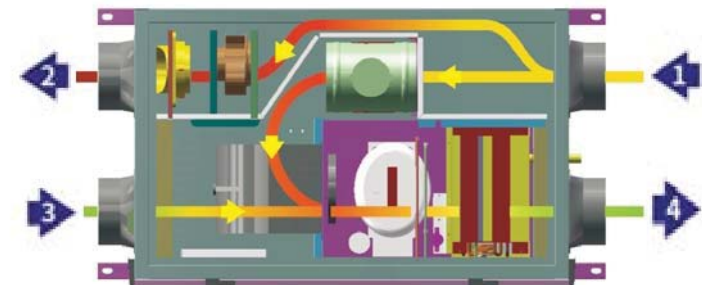
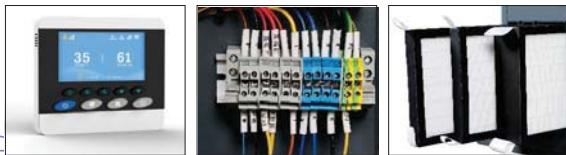
This fresh air is mixed with part of the air from the room, drained and blown into the room through a fine filter HEPA.

The excess moisture in the air will be condensate and turn into water form. The water will then be collected at a drain pan, where it will be pushed out with the help of some air pressure from the processed air that is flowing into the treated room.

Ultra-quiet centrifugal fan exhaust the internal polluted air to outdoor.

As the system is designed to provide fresh air into the room, the treated room will naturally be pressurized with positive air pressure. When the room is being pressurized, the polluted and humid air inside the room will be pushed out through the exhaust outlet of the machine.

The introduction of fresh, dry and cleaned air helps to solve the issue of humid and muggy indoor air.



1. return air 2.exhaust air 3.fresh air 4.supply air

DD-FS Series

Ducted Double Flow Dehumidifier with HEPA Air Purifying System

Specifications



Drain pan	SUS304, stainless steel
Controller	LCD, push-button, RS485 (MODBUS); Wi-fi
Operating t range, °C	5 -38
Condenser	thick copper tubes (0,5-0,75-1mm) with blue hydrophilic-coated aluminum fins
Filters	G4 + F7+H13+F7, Anion generator, UV light

Model	DD - 26FS	DD - 36FS	DD - 56FS	DD - 96FS
Maximum capacity, L/Day (30C, 80%)	28	40	60	100
Maximum capacity, L/Day(20C, 60%)	13	17	27	39
Supply airflow, m3/h	320-420	650-780	730-850	1250-1400
Fresh airflow, m3/h	320-420	650-780	730-850	1250-1400
Exhaust airflow, m3/h	160-210	400-520	500-650	700-850
Static Pressure Pa	100	100	100	120
Power, W	450	720	850	1150
Current, A	2	3,2	3,7	5
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz
Noise level, Db <	35	45	45	45
Compressor	Embraco	Embraco	Embraco	Panasonic
Refrigerant	134A	134A	134A	410A
Drain hole size, DN	20	20	20	20
Fresh air duct, mm	100	150	150	200
Return air duct, mm	100	150	150	200
Supply air duct, mm	100	150	150	200
Exhaus air duct, mm	100	150	150	200
Size, mm	1180x890x365	1180x890x365	1180x890x365	1180x890x365
Weight, kg	42	57	64	73

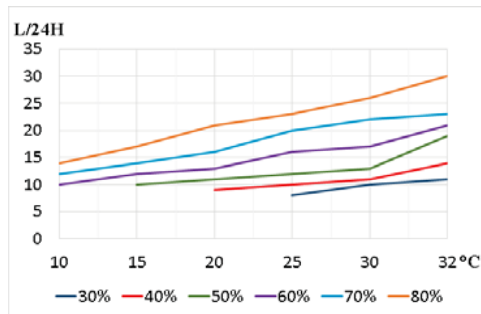
DD-FS Series

Ducted Double Flow Dehumidifier
with HEPA Air Purifying System

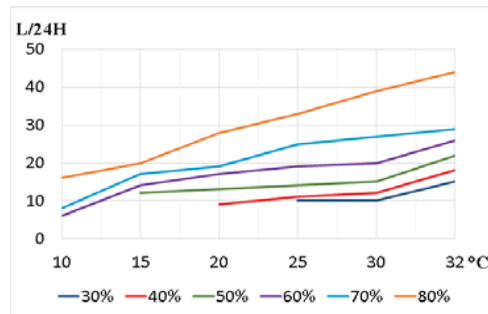
DanVex

Performance

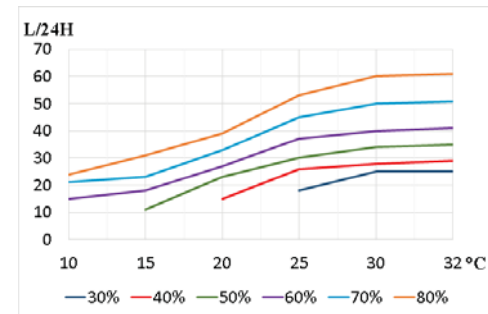
DD - 26FS



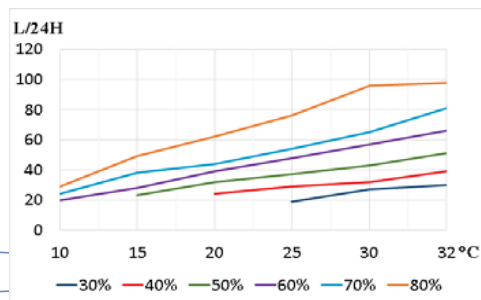
DD - 36FS



DD - 56FS



DD - 96FS



DanVex AD Adsorption dehumidifiers

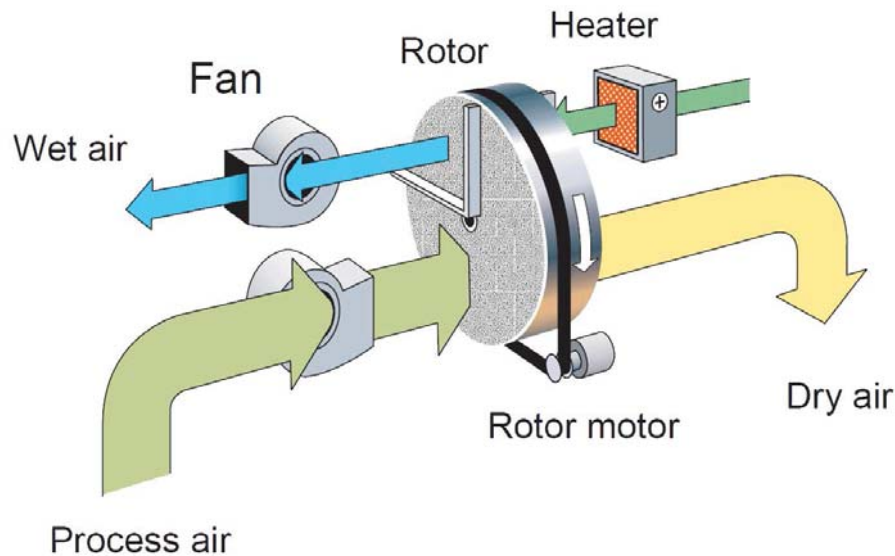
DanVex

Principle of operation

The DanVex adsorption type air dryer design allows to efficiently dry air with a humidity of up to 100% and a temperature ranging from -20°C to + 40°C using a minimum amount of energy. A special option with the temperature ranging from -30°C to +50 C.

Typically, these type dehumidifiers is used if the room requires a humidity of less than 30% and/or air temperature of less +10° C, since condensation dehumidifiers become ineffective under such conditions.

The DanVex AD is used for indoor or outdoor installation requiring off-line air humidity control combined with an air handling and air-conditioning system.



The principle of operation is the use of a moisture-absorbing rotor with high adsorbing properties.

Air is supplied to the rotor surface in such a way that working (drained) air passes through 75% of the rotor surface, and regeneration air preheated to a predetermined temperature passes through 25% of the rotor surface, counter-flowing to the working air. This air collects moisture from the sorbent and brings it out.

A small excess pressure of water vapor facilitates an efficient humidity exchange between the air and the sorbent, and the temperature of the regeneration air controls the quality of the regeneration process. In addition, the regeneration air performs the function of cleaning the inner surface of the rotor from possible contamination due to dust ingress from the working air. The rotation of the rotor makes it possible to combine the process of sorption of the working air along with the regeneration of the sorbent.

The absence of condensate makes it possible to use the unit without reference to the sewer system.



DanVex AD Adsorption dehumidifiers

DanVex



Product features

- the case and all assemblies are made of stainless metal,
- ability to work with an external humidity sensor (supplied),
- electrical engineering in accordance with the EN60204 international standard,
- IP 44 protection index,
- suitable for very cold places with a high humidity,
- all weather continuous operation at an ambient temperature ranging from -20 C to $+40\text{ C}$,
- the rotor made using a very effective silica gel with good water vapor absorbing feature,
- air flow, wheel drive, and wheel speed are optimized for maximum efficiency,
- unique seal design to reduce air leaks,
- dynamic design for stable operation while swinging.

Adsorption dehumidifiers are much more expensive than condensation dehumidifiers both in cost and in operation. Therefore, they are used in cases where the use of a dehumidifier of the condensation type is not possible or not profitable due to extreme requirements for humidity and / or temperature.





DanVex AD

Adsorption dehumidifiers

Specifications

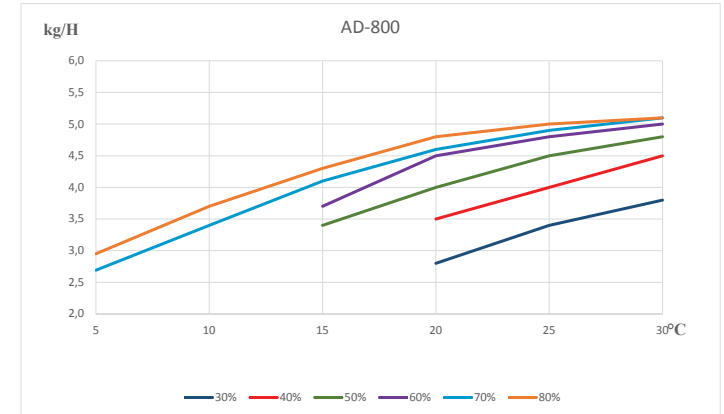
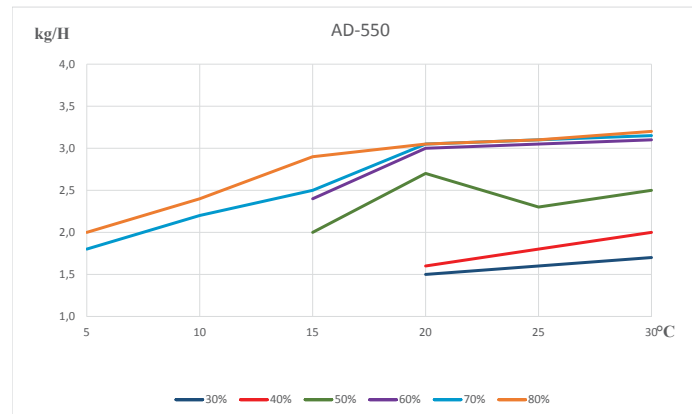
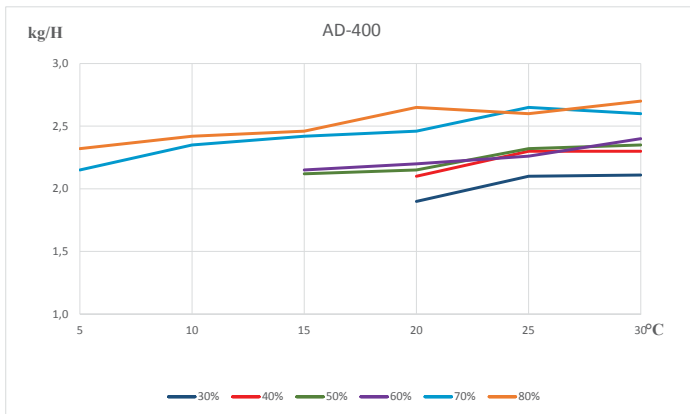
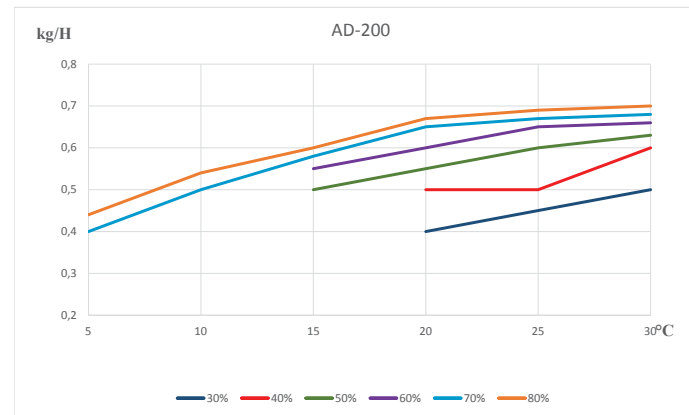
DanVex

Model	AD-200	AD-400	AD-550	AD-800	AD-1000	AD-1500	AD-2500	AD-3000
Nominal capacity (20°C/60%), kg/hour	0,6	2,2	3	5	7	10	15	19
Nominal capacity (20°C/60%), kg/day	14,4	52,8	72	120	168	240	360	456
Dry airflow, m3/hour	180-220	350	580	850	1100	1550	2500	3000
Static pressure, Pa	70	50	100	200	200	200	400	400
Regeneration airflow, m3/hour	60	110	190	260	400	580	925	1100
Static pressure, Pa	50	50	50	150	150	150	400	400
Heater power, KW	1,3	1,9	4,5	10	12	13	24	30
Heater current, A	6	10	20	16	18	26	50	60
Max power, KW	1,5	2,2	5,2	12	14	15	27	35
Supply	230V / 50Hz	230V / 50Hz	230V / 50Hz	380V / 50Hz	380V / 50Hz	380V / 50Hz	380V / 50Hz	380V / 50Hz
Noise, dB <	45	50	65	70+	70+	80	100+	100+
Diameter Proces air IN, mm	100	125	125	200	200	250	400	400
Diameter Dry air OUT, mm	100	125	125	200	200	250	450*225	450*225
Diameter Regeneration air IN, mm	80	80	80	150	150	160	200	200
Diameter Regeneration air OUT, mm	80	80	80	150	150	160	200	200
Size, mm width * height depth *	292*442*678	425*680*400	420*578*867	640*877*1232	640*877*1232	660*888*1238	856*1296*1303	856*1296*1303
Weight, kg	30	34	60	165	175	190	360	380

DanVex AD Adsorption dehumidifiers

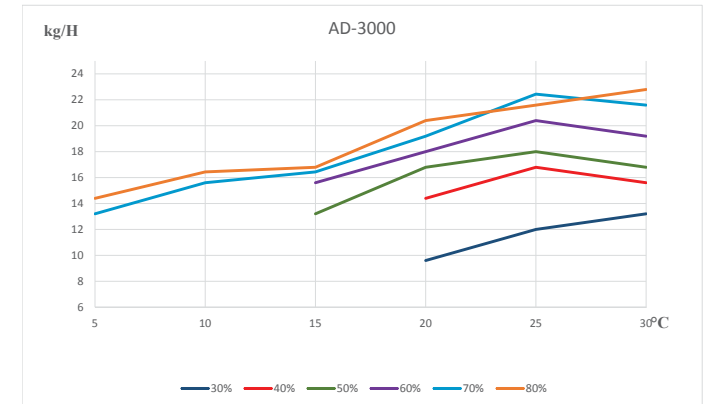
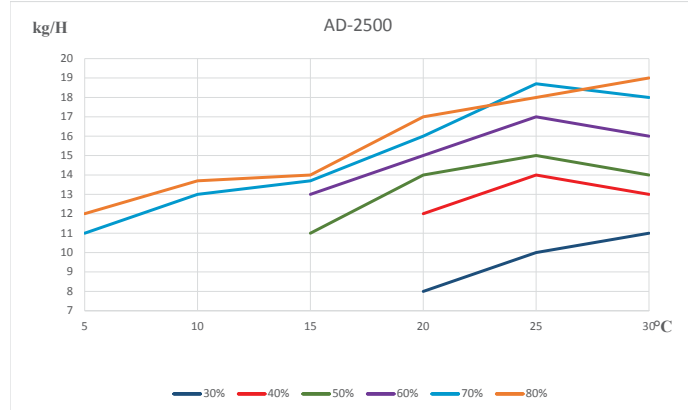
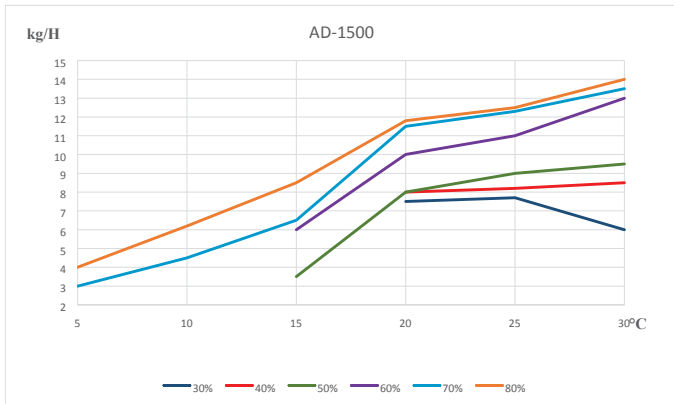
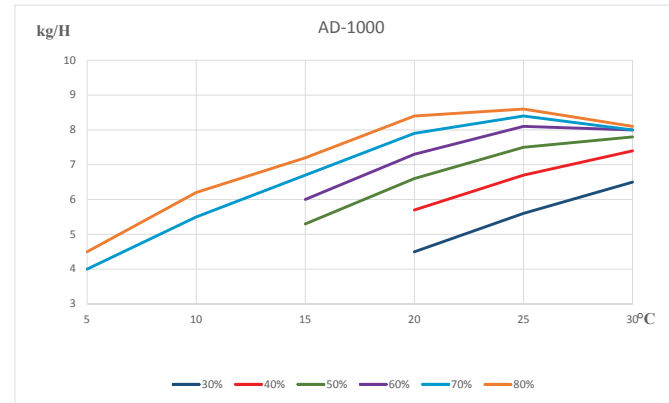
DanVex

Performance



DanVex AD Adsorption dehumidifiers

Performance



DanVex HUM Humidifiers

Principle of operation



DanVex Industrial Ultrasonic Humidifiers maintain humidity levels of up to 100%. The resulting “mist” temperature depends on the temperature of the water supplied.

The DanVex humidifiers are designed to be placed immediately on the floor. Also allowed on the wall.

The humidifiers are made of stainless steel.

Humidification of the air in the room is being done due to ultrasonic water atomization in the humidifier casing and the movement of water particles through the steam line using the airflow created by the built-in fan. The DanVex HUM series humidifiers are equipped with an electronic control panel. The humidity control is carried out using an external hygrostat.

The humidifier may operate in an automatic mode. When the set humidity is reached, the humidifier is disconnected, and it operates in a humidity control mode. With a decrease in humidity of more than 2% of the preset humidity, the humidifier turns on and moisturizes.



DanVex HUM Humidifiers

Product features



The advantages are:

- stainless steel,
- instant readiness to operate,
- low energy consumption,
- low operational cost,
- low maintenance cost,
- high fire safety class achieved due to the absence of heating elements,
- small size of water particles contributing to the quick absorption by air,
- easy installation and maintenance,
- modern and user-friendly design,
- excellent parameters for regulating the steam supply,
- uniform steam supply,
- compact dimensions,
- safe steam temperature,
- remote hygostat for controlling humidity in the room,
- water purification filter.

Application

The DanVex humidifiers are used in all fields of activity and production. The main application is the elimination of static electricity, dust reduction, and humidity control. Humidifier indispensable in furniture, paper, textile, leather, automotive, electrical, and chemical production, in printing houses, fruit and vegetable stores, warehouses, server rooms, , etc.

DanVex HUM Humidifiers



Specifications

Model	HUM-3S	HUM-6S	HUM-9S	HUM-12S	HUM-15S	HUM-18S	HUM-24S	HUM-48S
Maximum capacity, l/h	3	6	9	12	15	18	24	48
Maximum capacity, l/day	72	144	216	288	360	432	576	1152
Supply airflow, m3/h	180	180	280	280	300	400	480	960
Working range, Relative humidity, %	0% - 100%	0% - 100%	0% - 100%	0% - 100%	0% - 100%	0% - 100%	0% - 100%	0% - 100%
Static Pressure, Pa	20	20	40	40	50	50	50	70
Operating t range, °C	+5°C ..+38°C	+5°C ..+38°C	+5°C ..+38°C	+5°C ..+38°C	+5°C ..+38°C	+5°C ..+38°C	+5°C ..+38°C	+5°C ..+38°C
Mist vent	1 * 110	1 * 110	2 * 110	2 * 110	3 * 110	3 * 110	2 * 160	3 * 160
Power, W	300	600	900	1200	1500	1800	2500	4900
Voltage	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	220V/50Hz	380V/50Hz
Noise level, Db <	40Db(approx.)							
Air filter size, mm	245*130*12	245*130*12	445*105*12	445*105*12	445*105*12	445*105*12	445*105*12	545*145*12
Size in wooden packaging, mm, depth * width * height	700*460*740	700*460*740	760*550*750	760*550*750	770*770*750	770*770*750	890*600*680	950*840*680
Size without packaging, mm, depth * width * height	600/330/495	600/330/495	640/420/500	640/420/500	640*640*500	640*640*500	980*700*790	970*780*790
Weight with wooden packaging, kg	36,5	39,5	55	58,8	73	77	105	165
Net weight, kg	26	28	36	39	50,5	54	81	140