

Technical Brochure

Dehumidification Technology

Humiscope



Who we are

We are a group of engineers, technicians and draftsmen dedicated to our clients and committed to providing energy efficient indoor environment systems; from simple applications to specially engineered solutions.

Our products

Desiccant Dehumidifiers

work by passing air through a rotating desiccant wheel to extract moisture from the air. They achieve relative humidity levels below 35% and have proven themselves to reduce both operating costs and energy consumption.

Refrigerant Dehumidifiers

work best in spaces where the temperature is at 20°C and above and humidity levels of 50% and above. They work on the humidity of the room and run when the humidity is above its set point.

Humidifiers

add moisture to the air. Humidity has a significant influence on the rooms climate and thus has a great influence on the well-being of people or on the stability of industrial processes that take place in the room

'We are very happy with the outcome. Drying times were reduced by 50%. Essentially we created our own climate' ~ Peter Schulte, Managing Director, Schultes Meat

Our services



Design and Installation

We are experts in designing, building and installing state-of-the-art climate control systems from simple applications to specially engineered solutions.



Rentals

Whether the application is a temporary project or being able to test the technology before investing, renting is a risk-free option.



Service & Maintenance

With over 35 years' experience we are able to service any brand dehumidifier regardless of make or model. We can identify where improvements can be made.

Dehumidification technology

Humiscope provides tailored indoor climate solutions for a variety of industries. Below are examples of some industries and applications for which we have solved indoor climate control challenges.



Pharmaceutical

Dehumidifiers create a safe and stable environment for the manufacture and storage of pan coated tablets and gelatin capsules. Dehumidification technology is more energy efficient than other technologies in achieving and maintaining the required temperature. Having a stable environment allows gelatin capsules to dry without shrinkage. It evaporates moisture in the pan which allows the coating to dry precisely.



Meat production and food processing

Without some form of dehumidification, condensation and fog will occur in cold room environments where food is regularly processed and stored. Ice build-up in cold stores and process freezers can cause production delays and safety hazards which increase operating costs and energy consumption. Dehumidifiers introduce dry air into the cold store and extracts the wet humid air.



Dairy and spray drying

Heat and humidity can cause corrosion to machinery and can damage the product being dried. Furthermore, with added moisture in the air, the hygroscopic ingredients and powders absorb the excess moisture, making it become sticky and build up inside the conveying lines. Dehumidification physically removes the moisture from the incoming air. This allows for stable inlet conditions, enabling consistent quality and increased performance from the blowing or spray drying process.



Preservation and storage

Many materials are more susceptible to moisture than they are to temperature. Storage units and warehouses, museums, libraries, and archive rooms can all suffer from common humidity problems such as corrosion, rot, mould, moisture absorption, degradation of documents. A dehumidifier will remove moisture from the air and maintain the ideal climate all year round. Reduce your energy consumption and stress level. Set and forget.

Climate controlled rooms

Whether you require an end-to-end solution or looking to convert an existing space, we can deliver. Rooms can be built onto existing flooring or delivered on a skid base.

We use only state-of-the-art HVAC systems and hold ourselves to the highest professional standard. With a team of dedicated and highly skilled engineers, draftsmen and technicians we:

Custom design

Expertly build

Meticulously install

Deliver ready to operate

We don't just provide solutions, we work with you, as a partner, to fully understand what you're trying to achieve.



Drying Rooms

The purpose of a drying room is to create a temperature and humidity-controlled environment where the product can be dried or cured rapidly while still maintaining or improving its quality.



Cold Rooms

A cold room using dehumidification technology, ensures you never have to deal with condensation, fog and ice build-up again. It also prevents corrosion and keeps your stored product in its optimal state.



Ultra-low Dew Point Rooms

We create the optimal space for achieving low dew point control for your hygroscopic and moisture sensitive material. Sealed, airtight rooms that maintain controlled ultra-low humidity levels. Insulated and protected from external influences and designed for precise, consistent low dew point and temperature control.



Controlled Environment Room – CER

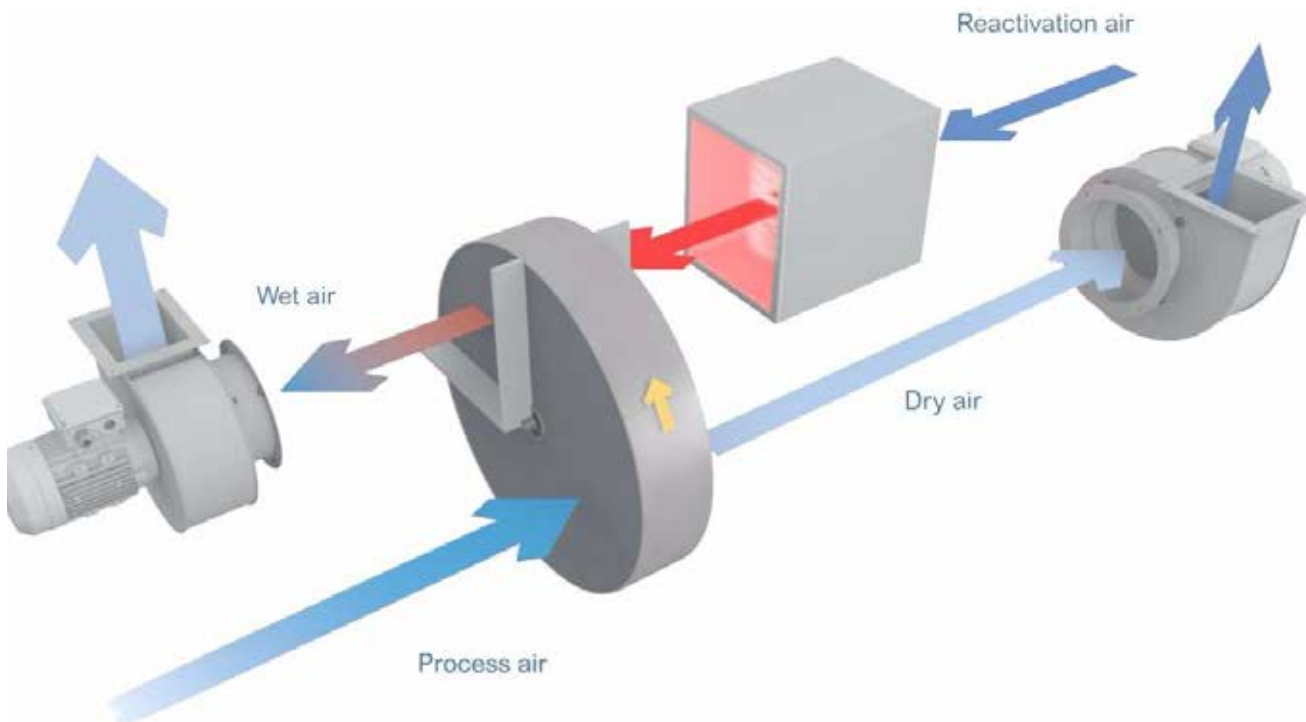
A Controlled Environment Room (CER), sometimes referred to as a Controlled Temperature Room or Chamber (CT) is an area usually within a larger facility whose purpose it is to precisely control the indoor environment. Hospitals, laboratories, and pharmaceutical and nutraceutical manufacturing facilities will house a climate-controlled room or storage chamber to ensure optimal manufacturing processes and the stable storage of medicines, vitamins, and hygroscopic material.

PRODUCTS

Desiccant Dehumidifiers

A large number of industrial materials and processes require dry air. Of the numerous processes available for drying air, desiccant rotor technology has proven itself in providing the best combination of low installation costs, a greater range of applications, and lower operating costs.

Humiscope supplies state-of-the-art desiccant dehumidifiers. Adapted to specific applications, each unit is equipped with the highest quality components and a design centred on simple maintenance and low energy consumption. The main reason to choose a desiccant dehumidifier is that it can operate at much lower temperatures than a refrigerant type, producing sub-zero dewpoint temperatures.





Products

TECHNICAL DATA

MODEL	ADS 150E	ADS 300E	AD 100E	AD 270E	AD 420E	AD 550E	AD 700E	AD 820E	AD 1250E
Type	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	0.57	1.1	0.59	0.99	1.95	2.67	2.71	4.78	6.74
Capacity L/h	0.57	1.1	0.59	0.99	1.95	2.67	2.71	4.78	6.74
Capacity L/day	13.68	26.4	14.16	23.76	46.8	64.08	65.04	114.72	161.76
Reactivation air flow m3/h	50	100	30	50	90	120	135	210	270
Process air flow m3/h	150	300	100	270	420	550	700	820	1250
Static pressure Pa	100	150	180	210	300	270	180	160	400
Sound pressure dB (A)	42	42	42	42	44	44	46	58	64
Weight kg	12	16	25	26	31.5	31.5	33	57	62
Dimensions mm	345x330x365	425x380x445	435x500x436	435x500x436	490x640x490	490x640x490	490x640x490	611x680x720	611x680x720
Power supply V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

Products

TECHNICAL DATA



MODEL	AD 800E	AD 1100T	AD 1000E	AD 1500E
Type	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	4.8	5	8.8	12.7
Capacity L/h	4.8	5	8.8	12.7
Capacity L/day	115.2	120	211.2	304.8
Reactivation air flow m3/h	250	250	350	500
Process air flow m3/h	800	1100	1000	1500
Static pressure Pa	200	300	300	200
Sound pressure dB (A)	65	66	64	64
Weight kg	145	150	205	210
Dimensions mm	1000x600x1000	1000x600x1000	1285x845x1255	1285x845x1255
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

MODEL	AD 2000E	AD 2000TE	AD 2500E	AD 3100T
Type	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	15.8	10.9	18.9	11.5
Capacity L/h	15.8	10.9	18.9	11.5
Capacity L/day	379.2	261.6	453.6	276
Reactivation air flow m3/h	680	450	820	450
Process air flow m3/h	2000	2000	2500	3100
Static pressure Pa	250	250	300	250
Sound pressure dB (A)	66	66	66	68
Weight kg	215	215	220	230
Dimensions mm	1285x845x1255	1285x845x1255	1285x845x1255	1285x845x1255
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial



Products

TECHNICAL DATA

MODEL	AD 3000E	AD 3500E	AD 4500TE	AD 4000E	AD 5000E	AD 6500TE	AD 7000E
Type	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	23	27.3	21.1	31.7	37.2	27.1	52.9
Capacity L/h	23	27.3	21.1	31.7	37.2	27.1	52.9
Capacity L/day	552	655.2	506.4	760.8	892.8	650.4	1269.6
Reactivation air flow m3/h	900	1100	900	1350	1600	1100	2300
Process air flow m3/h	3000	3500	4500	4000	5000	6500	7000
Static pressure Pa	400	350	300	400	400	400	400
Sound pressure dB (A)	68	68	69	70	72	73	71
Weight kg	350	360	360	490	530	545	680
Dimensions mm	1500x1020x1395	1500x1020x1395	1500x1020x1395	1895x1115x1500	1895x1115x1500	1895x1115x1500	2350x1350x1750
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

MODEL	AD 9000E	AD 12000TE	AD 11000E	AD 13000E	AD 15000TE	AD 19000E	AD 25000E
Type	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	63.7	65.9	81.8	92	70.2	131.1	162
Capacity L/h	63.7	65.9	81.8	92	70.2	131.1	162
Capacity L/day	1528.8	1528.8	1963.2	2208	1684.8	3146.4	3888
Reactivation air flow m3/h	2700	2300	3670	4300	2700	5500	7900
Process air flow m3/h	9000	12000	11000	13000	15000	19000	25000
Static pressure Pa	400	400	400	400	400	400	400
Sound pressure dB (A)	72	74	74	74	76	76	76
Weight kg	700	1350	1350	1390	1980	1980	2150
Dimensions mm	2350x1350x1750	3050x1600x1850	3050x1600x1850	3050x1600x1850	3850x1950x2150	3850x1950x2150	3850x1950x2150
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial



Products

TECHNICAL DATA

MODEL	ADP 2000E	ADP 3500E	ADP 5000E	ADP 6500E	ADP 8000E	ADP 9500E
Type	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	18.6	31.1	42.5	55.9	66	77.1
Capacity L/h	18.6	31.1	42.5	55.9	66	77.1
Capacity L/day	446.4	746.4	1020	1341.6	1584	1850.4
Reactivation air flow m3/h	700	1200	1700	2200	2600	3100
Process air flow m3/h	2000	3500	5000	6500	8000	9500
Static pressure Pa	400	400	400	400	400	400
Sound pressure dB (A)	60	64	65	66	69	70
Weight kg	490	550	590	690	710	730
Dimensions mm	1610x1000x1875	1710x1100x1975	1710x1100x1975	1810x1200x2075	1810x1200x2075	1810x1200x2075
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

MODEL	ADP 2002	ADP 3502	ADP 5002	ADP 6502	ADP 8002	ADP 9502
Type	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	16	28.7	38.2	50.7	58.8	66.9
Capacity L/h	16	28.7	38.2	50.7	58.8	66.9
Capacity L/day	384	688.8	916.8	1216.8	1411.2	1605.6
Reactivation air flow m3/h	700	1200	1700	2200	2600	3100
Process air flow m3/h	2000	3500	5000	6500	8000	9500
Static pressure Pa	400	400	400	400	400	400
Sound pressure dB (A)	60	64	65	66	69	70
Weight kg	470	530	570	670	690	710
Dimensions mm	1650x1000x1875	1750x1150x1975	1750x1150x1975	1850x1250x2075	1850x1250x2075	1850x1250x2075
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

Products

TECHNICAL DATA

MODEL	ADE 2500F	ADE 4000F	ADE 6000F	ADE 9000F
Type	Dessicant	Dessicant	Dessicant	Dessicant
Capacity kg/h	18.2	28.5	39.6	56.8
Capacity L/h	18.2	28.5	39.6	56.8
Capacity L/day	436.8	684	950.4	1363.2
Reactivation air flow m3/h	2000 - 4500	3000 - 7500	4000 - 11000	5500 - 15000
Process air flow m3/h	2500	4000	6000	9000
Static pressure Pa	350	350	350	350
Sound pressure dB (A)	71	72	74	74
Weight kg	N/A	N/A	N/A	N/A
Dimensions mm	Custom	Custom	Custom	Custom
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

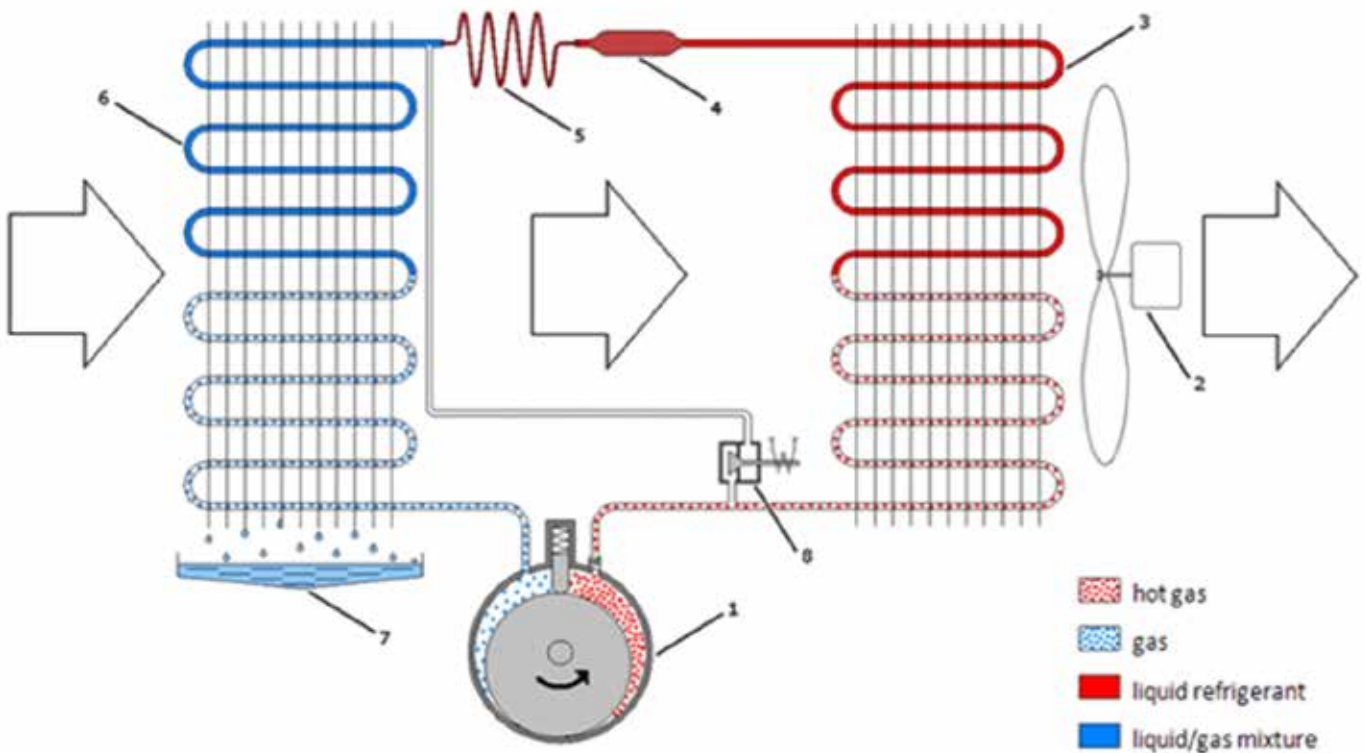
MODEL	ADE 11000F	ADE 15000F	ADE 19000F
Type	Dessicant	Dessicant	Dessicant
Capacity kg/h	70	94.3	119.2
Capacity L/h	70	94.3	119.2
Capacity L/day	1680	2263.2	2860.8
Reactivation air flow m3/h	7000 - 19000	9000 - 22000	11000 - 26000
Process air flow m3/h	11000	15000	19000
Static pressure Pa	350	350	350
Sound pressure dB (A)	76	78	78
Weight kg	N/A	N/A	N/A
Dimensions mm	Custom	Custom	Custom
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

PRODUCTS

Refrigerant dehumidifiers

Refrigerant dehumidifiers work by cooling air to the point where the invisible water vapour it contains begins to condense. This condensed water is drained and the dry air is reheated to decrease the relative humidity and produce a comfortable dew point temperature, returned to the internal space.

Highly reliable and quiet in operation, refrigerant dehumidifiers typically require only an annual internal inspection and clean. Humiscope offer a wide variety of capacities to suit every application.



Normal operation of a compressor-based condensation dryer:

1 - compressor, 2 - fan, 3 - condenser, 4 - filter (dehydrator), 5 - throttle, 6 - evaporator, 7 - condensate tank, 8 - solenoid valve



Products

TECHNICAL DATA



MODEL	ID-SP 0100	ID-SP 0130	ID-SP 0160	ID-SP 0190	ID-SP 0210	ID-SP 0260
Type	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	4.2	5.3	6.5	7.9	8.8	11.2
Capacity L/h	4.2	5.3	6.5	7.9	8.8	11.2
Capacity L/day	100	128	157	190	210	268
Reactivation air flow m3/h	N/A	N/A	N/A	N/A	N/A	N/A
Process air flow m3/h	900	1200	1600	1600	2000	2800
Static pressure Pa	50	50	50	50	50	50
Sound pressure dB (A)	55	56	60	61	62	62
Weight kg	100	100	105	110	120	130
Dimensions mm	748x404x575	748x404x575	748x404x575	748x404x575	1303x404x575	1303x404x575
Power supply V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	400/3/50	400/3/50
Application	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool

MODEL	ID-SP 0300	ID-SP 0350	ID-SP 0450	ID-SP 0580	ID-SP 0750	ID-SP 0950
Type	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	12.6	14.9	18.8	24.2	31.7	39.8
Capacity L/h	12.6	14.9	18.8	24.2	31.7	39.8
Capacity L/day	302	358	452	581	760	955
Reactivation air flow m3/h	N/A	N/A	N/A	N/A	N/A	N/A
Process air flow m3/h	2800	3800	4000	4800	7000	8200
Static pressure Pa	50	50	50	50	130	130
Sound pressure dB (A)	63	64	65	65	66	66
Weight kg	140	220	230	240	410	430
Dimensions mm	1303x404x575	1303x404x575	1858x404x575	1858x404x575	1858x404x1130	1858x404x1130
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50	400/3/50
Application	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool

Products

TECHNICAL DATA

MODEL	ID-SP 1100	ID-SP 1400	ID-SP 1500	ID-SP 1700
Type	Refrigerant	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	46.7	56.3	61.7	71.6
Capacity L/h	46.7	56.3	61.7	71.6
Capacity L/day	1120	1350	1480	1719
Reactivation air flow m3/h	N/A	N/A	N/A	N/A
Process air flow m3/h	11000	12500	13000	15000
Static pressure Pa	200	200	200	200
Sound pressure dB (A)	68	69	70	71
Weight kg	650	720	780	840
Dimensions mm	2413x404x1130	2413x404x1130	3800x900x1144	3800x900x1144
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50	400/3/50
Application	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool

MODEL	ID-SP 1900	ID-SP 2200	ID-SP 3000
Type	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	77.9	90.8	123.3
Capacity L/h	77.9	90.8	123.3
Capacity L/day	1870	2180	2960
Reactivation air flow m3/h	N/A	N/A	N/A
Process air flow m3/h	15000	17000	25000
Static pressure Pa	200	200	200
Sound pressure dB (A)	71	72	73
Weight kg	900	950	1250
Dimensions mm	3800x900x1144	3800x900x1144	1000x3390x1640
Power supply V/ph/hz	400/3/50	400/3/50	400/3/50
Application	Industrial, Swimming Pool	Industrial, Swimming Pool	Industrial, Swimming Pool

Products

TECHNICAL DATA



MODEL	DDS/DCS 040	DDS/DCS 050	DDS/DCS 060	DDS/DCS 070	DDS/DCS 090
Type	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	1.9	2.2	2.5	2.8	3.8
Capacity L/h	1.9	2.2	2.5	2.8	3.8
Capacity L/day	46	52	61	68	92
Reactivation air flow m3/h	N/A	N/A	N/A	N/A	N/A
Process air flow m3/h	350	450	500	600	700
Static pressure Pa	40	40	40	40	40
Sound pressure dB (A)	43	45	46	47	48
Weight kg	46	46	46	55	55
Dimensions mm	850x708x280	850x708x280	850x708x280	1050x780x280	1050x780x280
Power supply V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

MODEL	DDS/DCS 100	DDS/DCS 160	DDS/DCS 190	DDS/DCS 210	DDS/DCS 230	DDS/DCS 300
Type	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	4.1	6.9	7.8	8.9	9.4	12.5
Capacity L/h	4.1	6.9	7.8	8.9	9.4	12.5
Capacity L/day	99	165	186	213	226	300
Reactivation air flow m3/h	N/A	N/A	N/A	N/A	N/A	N/A
Process air flow m3/h	800	1000	1200	1500	1500	2000
Static pressure Pa	40	40	40	40	40	40
Sound pressure dB (A)	49	51	53	54	55	57
Weight kg	55	88	88	100	100	102
Dimensions mm	1050x780x280	1350x850x330	1350x850x330	1550x850x330	1550x850x330	1550x850x330
Power supply V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Application	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial	Commercial, Industrial

Products

TECHNICAL DATA



MODEL	DVS/DOS 070	DVS/DOS 090	DVS/DOS 100	DVS/DOS 160
Type	Refrigerant	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	2.8	3.8	4.1	6.7
Capacity L/h	2.8	3.8	4.1	6.7
Capacity L/day	67	92	99	161
Reactivation air flow m3/h	N/A	N/A	N/A	N/A
Process air flow m3/h	600	700	800	1000
Static pressure Pa	200	175	150	100
Sound pressure dB (A)	46	47	48	50
Weight kg	80	80	80	140
Dimensions mm	550x330x170	550x330x170	550x330x170	750x330x1700
Power supply V/ph/hz	230/1/50	230/1/50	230/1/50	230/1/50
Application	Swimming Pool	Swimming Pool	Swimming Pool	Swimming Pool

MODEL	DVS/DOS 190	DVS/DOS 210	DVS/DOS 230
Type	Refrigerant	Refrigerant	Refrigerant
Capacity kg/h	7.6	8.9	9.4
Capacity L/h	7.6	8.9	9.4
Capacity L/day	182	213	225
Reactivation air flow m3/h	N/A	N/A	N/A
Process air flow m3/h	1200	1400	1400
Static pressure Pa	90	40	40
Sound pressure dB (A)	52	53	54
Weight kg	140	160	160
Dimensions mm	750x330x1700	750x330x1700	750x330x1700
Power supply V/ph/hz	230/1/50	230/1/50	230/1/50
Application	Swimming Pool	Swimming Pool	Swimming Pool

Call us – obligation
free – and we can
talk through your
specific concerns
and suggest some
solutions that would
work best for you!

Humiscope

Master your indoors

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