

Fridge Dryer ultra.dry UDA/UDW



Why drying compressed air?

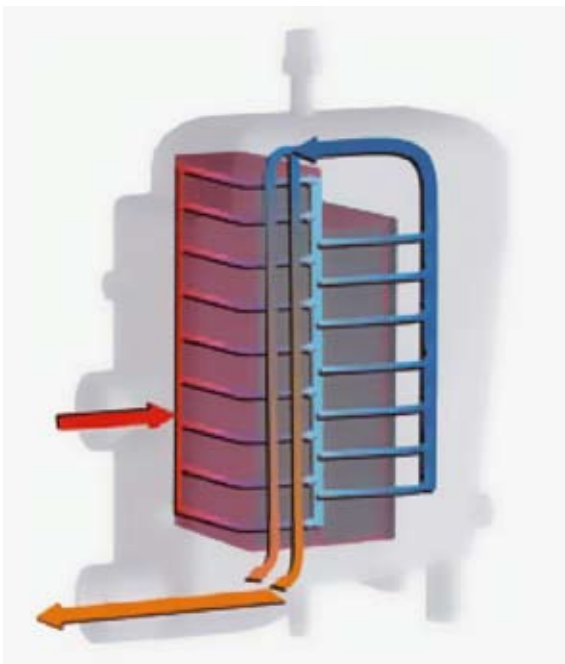
■ Compressed air is used in almost all areas of industrial manufacturing as a source of energy or processing. Compressed air needs to be dry, oilfree and clean in order to prevent costly production downtimes and losses in the production quality. The atmospheric air drawn in contains harmful substances, dirt particles and moisture in the form of water vapour, which condenses out in compressed air pipes and can lead to considerable costs (corrosion, freezing etc.).

3-in-1 configuration

■ The air-to-air exchanger, evaporator and demister are housed in a single aluminium module. This ensures a very compact, robust and energy efficient design.

Modular design

■ Each ultra.dry UDA/W dryer features multiple exchangers, up to a maximum of 10. Maintenance is simplified and service life is increased.



Scroll compressor technology

■ Scroll compressors (standard from UDA 4650) offer energy savings of around 20%. The extremely robust design tolerates liquid refrigerant returns, reducing the chance of compressor damage. Reduced vibrations increase dryer longevity, and there is no need to pre-heat the dryer at start-up.

Condensate removal

■ The exchangers unique cross-flow design features PERMASEP, with the condensate being separated as soon as it is created, along the entire cooling path (in traditional solutions all condensate is removed at the end of the cooling circuit). PERMASEP improves dew points and reduces energy consumptions.



Demister separator

■ The demister separator is up to 5 times larger than typical solutions, improving condensate separation. Unlike centrifugal separators, the demister configuration works perfectly even at reduced air flows.

Low air velocities

■ UDA / UDW wide air circuit results in low air velocities, improving condensate removal and reducing pressure drops.

Easy to install

■ ultra.dry UDA/UDW compact design and thoughtful component layout provide extreme installation flexibility. The single-sided entry for the condenser air flow and frontal access for all controls and refrigeration components ensure that the dryer occupies less valuable plant floor space.

Easy to operate

■ A combination of analogue gauges and digital displays allows ultra.dry UDA/UDW operation to be easily monitored at a glance. Microprocessor-based controls provide warnings and alarms ensuring correct dryer operation. Numerous remote monitoring and operation options are also offered.



Easy to maintain

■ Easily removable panels allow quick access to the interior components. The refrigeration circuit itself is in a separate compartment at the dryer front. The control enclosure is hinged for easy troubleshooting. Removable condenser inlet air filters (optional) facilitate cleaning.

Full range of options

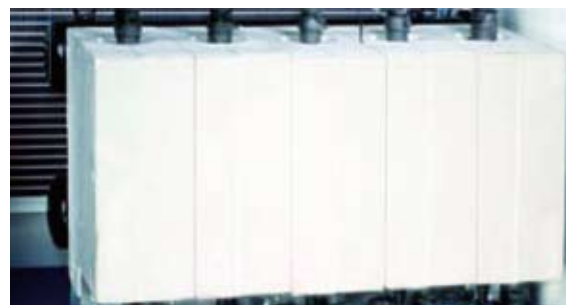
■ ultra.dry fridge dryer offers the right solution for all individual needs:

- air- or water-cooled versions
- centrifugal fans
- copper fin air-cooled condenser.

Advanced microprocessor technology

ultra.dry UDA / UDW features the most advanced microprocessor control technology. A comprehensive digital display keeps the User fully informed, whilst extensive programming allows personalized dryer operation according to each individual need. Maintenance operations are simplified, and there are numerous remote Supervising options.

- Digital display of the dewpoint, plus the air inlet and outlet temperatures.
- Multi-level menus with multiple password protection and extensive programming possibilities.
- 15 worded or coded alarms ensuring faultless dryer operation.
- Consensate drain control and programming.
- Self diagnostic system (UDA9100 - UDA11500).
- Volt-free general alarm contact for remote alarm indication.
- „DryPlan“: weekly energy saving program (UDA9100 - UDA 11500).
- Remote connection options:
 - RS485 Serial connection to a Supervisor system (MODBUS and other leading versions).
 - Remote alarm indications via GSM directly to a cell phone;
 - „PlantWatch“ Supervisor system (UDA9100 - UDA11500)
 - Remote display module:
- Alarm history (stores the last 50 alarms). Also memorizes (UDA 9100 - 11500) the dryer operating parameters at each alarm intervention.



Technical data ultra.dry UDA

Modell UDA	Volume flow 7 bar g m ³ /h	power kW	electrical connection V/ph/Hz	connection	dimensions			weight kg
					Width	Depth	Height	
UDA 01350	1350	2,68	400/3/50	DN 80	660	1351	1400	244
UDA 01700	1700	3,69	400/3/50	DN 80	660	1351	1400	254
UDA 02150	2150	4,49	400/3/50	DN 80	660	1351	1400	276
UDA 02700	2700	5,71	400/3/50	DN 100	660	1230	1400	318
UDA 03700	3700	7,71	400/3/50	DN 100	660	1230	1447	352
UDA 04650	4650	7,82	400/3/50	DN 150	910	1790	1447	526
UDA 05500	5500	8,91	400/3/50	DN 150	910	1790	1447	551
UDA 06700	6700	11,25	400/3/50	DN 150	910	1790	1447	624
UDA 09100	9100	14,04	400/3/50	DN 200	930	2860	2079	1077
UDA 11500	11500	17,96	400/3/50	DN 200	930	2860	2079	1102

Technical data ultra.dry UDW

Modell UDW	Volume flow 7 bar g m ³ /h	power kW	electrical connection V/ph/Hz	connection		dimensions			weight kg
				air	water	Width	Depth	Height	
UDW 01350	1350	2,16	400/3/50	DN 80	1 1/4"	660	1351	1264	245
UDW 01800	1800	3,16	400/3/50	DN 80	1 1/4"	660	1351	1264	243
UDW 02350	2350	3,64	400/3/50	DN 80	1 1/4"	660	1351	1264	296
UDW 03000	3000	4,85	400/3/50	DN 100	1 1/4"	660	1230	1400	343
UDW 04100	4100	6,64	400/3/50	DN 100	1 1/4"	660	1230	1310	332
UDW 05100	5100	6,04	400/3/50	DN 150	1 1/2"	910	1790	1310	560
UDW 06000	6000	7,32	400/3/50	DN 150	1 1/2"	910	1790	1310	526
UDW 07200	7200	9,17	400/3/50	DN 150	1 1/2"	910	1790	1310	659
UDW 10000	10000	11,55	400/3/50	DN 200	2"	930	2860	1927	1055
UDW 12500	12500	14,91	400/3/50	DN 200	2"	930	2860	1927	1065

In accordance with ISO 7183 related to 1 bar a, 25° C (air-cooled version) & 30° C (water cooling temperature and 40° C water condensing temperature), operating pressure 7 bar g, compressed air inlet temperature 35°C, ambient temperature 25°C and pressure dew-point 3°C. Refrigerant R 407c.

Operating conditions: Max. operating pressure is 14 bar, max. ambient temperature is 46°C, max. compressed air inlet temperature is 65°C. UDW: min. water temperature 20°C, max. water temperature 45°C. Electrical connection: 400V ± 10% / 3Ph / 50 Hz (altern. 460/3/60)

Correction factor: Performance = nom. flow (7 bar) x K1 x K2 x K3 x K4.

operating pressure	bar	3	4	5	6	7	8	9	10	11	12	13	14
	K1	0,67	0,80	0,88	0,94	1,00	1,05	1,09	1,13	1,16	1,18	1,21	1,23

dewpoint	°C	3	4	5	6	7	8	9	10
	K2	1,00	1,06	1,12	1,18	1,24	1,27	1,27	1,27

Compressed air	°C	30	35	40	45	50	55	60	65
inlet temperature	K3	1,26	1,00	0,82	0,67	0,55	0,47	0,45	0,43

Ambient	°C	20	25	30	35	40	46
temperature	K4	1,06	1,00	0,94	0,88	0,82	0,74