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 sub- stances, dirt particles and moisture in the form of water vapour, which condenses out in compressed air pipes and can lead to considerable costs (corrosi- on, freezing etc.).

3-in-1 con guration

The air-to-air exchanger, evaporator and demister are housed in a single aluminium module. This en- sures a very compact, robust and energy ef cient design.

Modular design

Each ultra.dry UDA/W dryer features multiple exchangers, up to a maximum of 10. Maintenance is simpli ed and service life is increased.
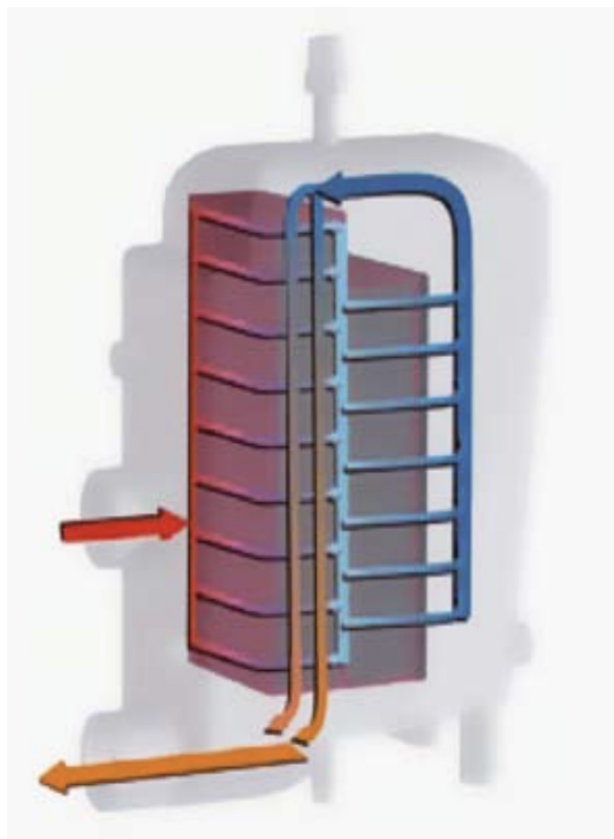
Scroll compressor technology

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

Condensate removal

The exchangers unique cross- ow design fea- tures PERMASEP, with the condensate being se- parated as soon as it is created, along the entire cooling path (in traditional solutions all conden- sate is removed at the end of the cooling circuit). PERMASEP improves dew points and reduces ener- gy consumptions.

Demister separator

The demister separator is up to 5 times larger than typical solutions, improving consensate sepa- ra- tion. Unlike centrifugal separators, the demister con guration works perfectly even at reduced air ows.

Low air velocities

UDA / UDW wide air circuit results in low air velocities, improving condensate re- moval and redu- cing pressure drops.

Easy to install

ultra.dry UDA/UDW compact design and thoughtful component layout provide extreme installation exibility. The single-sided entry for the condenser air ow and frontal access for all controls and re- frigeration components ensure that the dryer occu- pies less valuable plant oor 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 cor- rect 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 troubleshoo- ting. Removable condenser inlet air lters (optio- nal) 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 n 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 simpli ed, 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 ver sions).
  • 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 m³/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 m³/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 dewpoint 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

Technical alterations reserved.

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