



Annual Energysaving 55%

# Annual energy saving ensured by patented thermal mass technology

1123 €	Refrigeration dryer with hot gas bypass control	Patented refrigeration dryer ultra.dry
Flow rate in m³/h	1300	1300
Pressure dewpoint	3-4°C	3°C
Energy comsumption per year in kWh	21777	9300
Energy cost per year in €	<u>1960</u>	<u>837</u>

This energy saving example is base on:

Industrial production with two shifts, a five day week (4000 operating hours a year) and a electricity price of 9 Eurocent per kWh.

Technical alterations reserved (1/2007)

### The cost saving effect of the patented ultra.dry refrigeration dryer

During pauses in operation, at times of low demands and downtime, ultra.dry refrigeration dryers save energy. The control system operates without preset run-on periods. The integrated thermal mass ensures that the system is ready for operation at all times. A further advantage of ultra.dry refrigeration dryers is the very low pressure drop.



### ultrafilter gmbh

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Compared to a dryer with hot gas bypass control, for example, in single shift operation an ultra.dry refrigeration dryer ensures a saving of from  $380 \in$  to  $4700 \in$  a year due to the on-off regulation of the compressor.

# Patented refrigeration dryer ultra.dry



ULTRAFILTER **THE FILTRATION MANUFACTURER** 

Your compressed air specialist:

### Why compressed air drying?

Compressed air is an indispensable energy for propulsion and processing in many areas of industrial and technical manufacturing. Compressed air must be dry, free of oil and clean, in order to avoid costly break downs in production. Compressed air is produced by making air denser, that is to say a compressor sucks ambient air in. This air usually contains harmful substances, particles, hydro-carbons and also humidity in the form of water vapour. If not purified and dryed the compressed air can then lead to operating disturbances and thus to considerable but avoidable costs.

# The patented ultra.dry energy saving refrigeration dryer

The ultra.dry energy saving patented thermal-mass dryers work differently from all other refrigeration dryers. This means that the refrigeration dryer only consumes power when necessary and thus reduces energy requirement by up to 80% under normal operating conditions.

### Low differential pressure guarantees additional energy savings

The air/air and refrigerant/air heat exchangers are fitted with large diameter copper tubes, the smooth inner walls of the tubes are effective in preventing dirt deposits, resulting in a low differential pressure of the ultra.dry refrigeration dryer. Guaranteed for years.

### The heat transfer with the innovative advantage

A specially constructed heat exchanger is embedded in a thermal mass system, which enables heat to transfer directly via the common cooling fins (ribs) of the heat exchanger to the thermal mass.

This guarantees minimal energy requirement and dewpoint reliability.



The patented thermal mass system guarantees a constant dewpoint and up to 80% lower energy requirement.

# Quality products with 5 years functional guarantee

■ In order to produce ultra.dry refrigeration dryers, only the best components that meet the high quality standards of production. The Quality Assurance system according to ISO 9001 means that all appliances receive the "Quality Product" certificate. In combination with the maintenance-friendly and user-friendly method of construction, this guarantees absolute reliability and security of operation, guaranteed by the fiveyear operating guarantee.



# Highly efficient stainless steel condensate separator

A deflector plate forces the condensed air to rotate into the condensate separator. The air then flows through a stainless steel wire mesh, which guarantees a very high degree of water separation with an efficiency of 99,9%.

# Safe and energy saving condensate drainage

The reliable ultra.drain condensate drain is fitted with an intelligent level control that prevents compressed air loss, when discharging condensate.



# ultra.control: the intelligent microprocessor dryer control

The innovative ultra.control technology is based on the most modern microprocessor electronics. All necessary parameters such as cooling temperature, refrigerant circulation pressure or ambient temperature are regulated. The current operating state of the dryer is continually calculated and controlled/monitored. Thus, regardless of changing parameters a constant pressure dewpoint and absolute security of operation are ensured.

### ultra.dry – the energy saving dryer with the decisive benefits

- Energy saving: the refrigeration dryer compressor starts only when necessary and thus reduces the energy requirement by up to 80%
- Very reliable refrigeration system, as simple as a household refrigerator
- High dewpoint consistency, especially during rapid load changes
- No warm-up times necessary before start-up of compressed air dryer
- The dryer can also remain switched on during longer periods of inactivity
- Constant performance data without readjustment of a hot gas bypass valve
- Reduced number of welded joints means lower risk of leakage

## Technical information ultra.dry

Model UD	Inlet flowrate 7 bar g.	Effective power consumption	Power supply	Connection	Dimensions (4)							
	m <sup>3</sup> /h	kW	V/ph/Hz		А	В	с	D	Е	F	G	kg
UD 0017	17	0.15	230/1/50	1⁄2"	530	300	510	104	60	165	41	35
UD 0025	25	0.17	230/1/50	1/2 "	530	300	510	104	60	165	41	36
UD 0035	35	0.21	230/1/50	1⁄2 "	530	300	510	67	50	175	41	35
UD 0054	54	0.18	230/1/50	1⁄2 "	530	300	510	67	400	225	41	39
UD 0075	75	0.29	230/1/50	1/2 "	530	300	510	67	400	225	41	41
UD 0110	110	0.39	230/1/50	3/4 "	650	370	750	100	476	360	41	65
UD 0150	150	0.53	230/1/50	3/4 "	650	370	750	100	476	360	41	67
UD 0190	190	0.55	230/1/50	1"	650	370	750	100	476	360	41	80
UD 0230	230	0.74	230/1/50	1"	650	370	750	100	476	360	41	80
UD 0300	300	0.82	230/1/50	1"	780	370	850	213	498	360	41	103
UD 0375	375	0.84	230/1/50	1 ½"	780	735	940	84	608	447	51	167
UD 0480	480	1.10	230/1/50	1 ½"	780	735	940	84	608	447	51	189
UD 0600	600	1.53	400/3/50	2"	865	1017	1100	102	656	445	51	260
UD 0750	758	1.85	400/3/50	2"	865	1017	1100	102	656	445	51	264
UD 0850	850	2.22	400/3/50	2"	865	1017	1100	102	656	445	51	293
UD 1020	1020	2.37	400/3/50	2 ½"	865	1317	1100	102	656	445	51	378
UD 1175	1175	3.16	400/3/50	2 ½"	865	1317	1100	102	656	445	51	393
UD 1350	1350	3.55	400/3/50	DN80	962	1550	1567	153	656	1100	103	650
UD 1650	1650	4.57	400/3/50	DN80	962	1550	1567	153	656	1100	103	770
UD 2250	2250	6.11	400/3/50	DN100	962	1900	1567	153	656	1100	137	930

In accordance with ISO 7183, based on 1 bar (g) at 20°C and operating pressure 7 bar(g), compressed air inlet temperature 35°C, Ambient temperature 25°C and pressure dewpoint 3°C Refrigerant R134a

Operating Parameters: Maximum operating pressure 16 bar(g), maximum ambient-temperature 50°C, maximum inlet temperature 70°C.

Correction factors: Tabe Flow rate = Flow rate (7bar) x K1 x K2 x K3 x K4.

Operating pressure			bar	3	4	5	6	7	8	9	10	11	12	13	14	15	16
			K1	0.71	0.82	0.90	0.96	1,00	1,04	1,07	1,09	1,11	1,13	1,15	1,16	1,18	1,19
Pressure dewpoint	°C	3	5	7	9	Ambient temperature				°C	20	25	30	35	40	45	50
	K2	1.00	1.12	1.24	1.38					К3	1.05	1.00	0.95	0.89	0.84	0.78	0.72
Inlet temperature		°C	30	35	40	45	50	55	60	65	70						
			K4	1.23	1.00	0.81	0.66	0.57	0.52	0.48	0.44	0.40					







#### ultrafilter trykluftprogram:

ultrafilter valideret trykluft program indenfor, filter, Køletørrer samt adsorptionstørrer.

ultrafilter validated Compressed air filter program with filter, dryer and desiccant dryer.

### (ultra.air) ® GROUP ultraair ultrafilter ®

#### Trykluftfilter:

Trykluftfilter til brug for håndværkere, værksteder og til mindre kritiske applikation i industrien.

Compressed air filter for use by craftsmen, workshops, and for less critical applications in the industry.



#### Procesfiltrering:

Procesfilter for luft og Gas samt væskefiltrering fra 3M / Cuno, sterilfilter, dampfilter samt Membran filtrering.

Process filter for air / gas and liquid filtration, sterile filter steam filter, and Membran filtration.

#### Vandfilter

Stort program for vandfilter fra Cuno & 3M

A wide range of water filter from Cuno & 3M



### Nitrogen og Oxygen systemer

Produktion af egen nitrogen eller oxygen, med et modul opbygget system som kan udvides efter behov.

Producing own nitrogen or oxygen, with a modular system which can be expanded as needed.



Måleinstrumenter

Måleudstyr til måling og overvågning af trykluft- og nitrogen udstyr.

Measuring equipment for measuring and monitoring of compressed air and nitrogen plant.



#### Service:

Vi tilbyder opstart og montering af alle vores produkter. ogkan tilbyde serviceaftaler på alle vores produkter. Vi har samarbejdspartner i Danmark, Sverige, Norge, Finland, og Island.

We offer start-up and installation of all our products. And we can offer service on all our products. We have partner in Denmark, Sweden, Norway, Finland, Iceland.

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