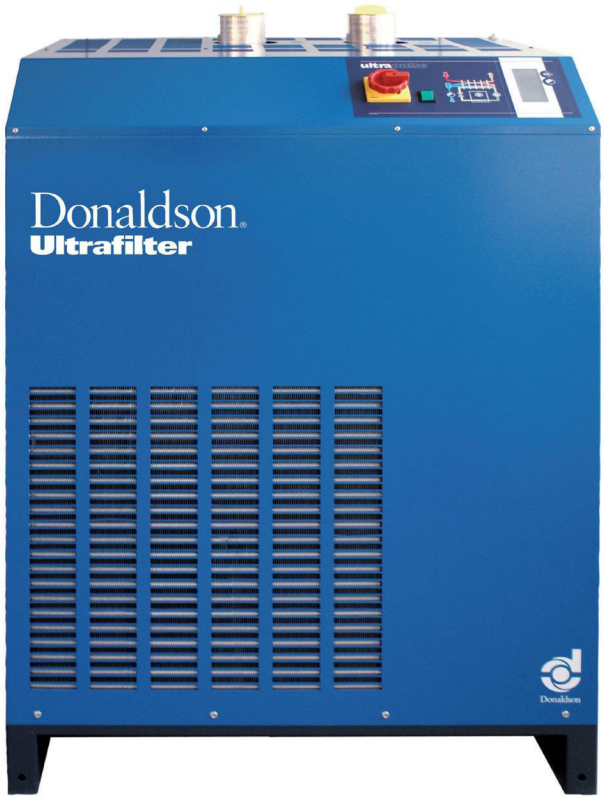
Technical Data Sheet: BURAN

Refrigeration Compressed Air Dryers for volume flows from 1000 to 1650 m³/h

The compressed air is being fed into the dryer and being pre-cooled in the air-to-air heat exchanger by the outgoing cold compressed air. The pre-cooled air then passes through the refrigerant-to-air heat exchanger where it is being cooled further down to the required pressure dew point. The moisture in the compressed air condenses out and gathers and discharges automatically. Finally, the cold discharged air is being reheated by the the incoming compressed air. This saves energy and prevents any moisture forming beyond the dryer in the compressed air system. The cooling capacity of the refrigeration cycle is being controlled by a microprocessor based controler to realize energy savings of up to 90 % and to assure the full dryer functionabilty for partial loads, too.



type	volume flow*	volume flow*	pressure drop	energy consumption in kW			cooling air requirement	air connections	weight
	m³/h	m³/min	bar	100 % load	50 % load	0 % load	m³/h	BSP	kg
DC 1000 AX	1000	16.67	0.27	2.40	1.32	0.24	3100	2 1/2"	177
DC 1175 AX	1175	19.58	0.29	2.56	1.41	0.26	2600	2 1/2"	180
DC 1350 AX	1350	22.50	0.21	2.80	1.54	0.28	2600	2 1/2“	185
DC 1500 AX	1500	25.00	0.25	2.95	1.65	0.30	2600	2 1/2“	190
DC 1650 AX	1650	27.50	0.26	3.10	1.71	0.31	2600	2 1/2“	196
*according to ISO 7183									

Subject to change 03/2010

Buran DC 1000 AX - DC 1650 AX

Features Buran dryers DC 1000 AX - DC 1650 AX	Benefits
Microprocessor based controler, no hot gas bypass	Energy savings up to 90 %
Aluminium heat exchanger	No corrosion inside the heat exchanger due to the contact with wet compressed air
High overload capacity up to a pressure dew point of approx. +20 °C	In case of overload, the dryer will only switch off at a dew point above than appr. +20 °C
Electronic level controlled condensate drain	No compressed air losses due to condensate removal, therefore reduction of operating costs
All dryers in metal cabinet construction	Optimum protection against mechanical damage and against dirt
Lightweight & compact design	Minimum space requirement (on stock, for transport and for the installation in the compressed air network).
Potetential free alarm contact	Economical operation and safe system installation in the compressed air network

Product description:
Complete compressed air drying system, electronic level controlled condensate drain, dew point indicator (LCD Display), potential free alarm contact, metal housing, and power plug. The TRISAB aluminium heat exchanger includes three functions in one: air-to-air heat exchanger, air-to-refrigerant heat exchanger and condensate separator.

Pressure dew point:
+3 °C

Power supply:
400 V / 3 Ph / 50 Hz

Refrigerant:
R134a

Medium temperature:
max. +70 °C

Noise pressure level:
< 70 dB (A)

Protection class:
IP 20

Operating pressure:
min. 2 bar (g) / max. 16 bar (g)

Declaration of conformity:
acc. to 2006/42/EG annex II A

Medium:
Compressed air

Ambient temperature:
min. +2 °C / max. +50 °C

Sizing

CA inlet temperature	°C	30	35	40	45	50	55	60	65	70
Factor	f_{ti}	1.17	1.00	0.88	0.75	0.58	0.48	0.44	0.42	0.40

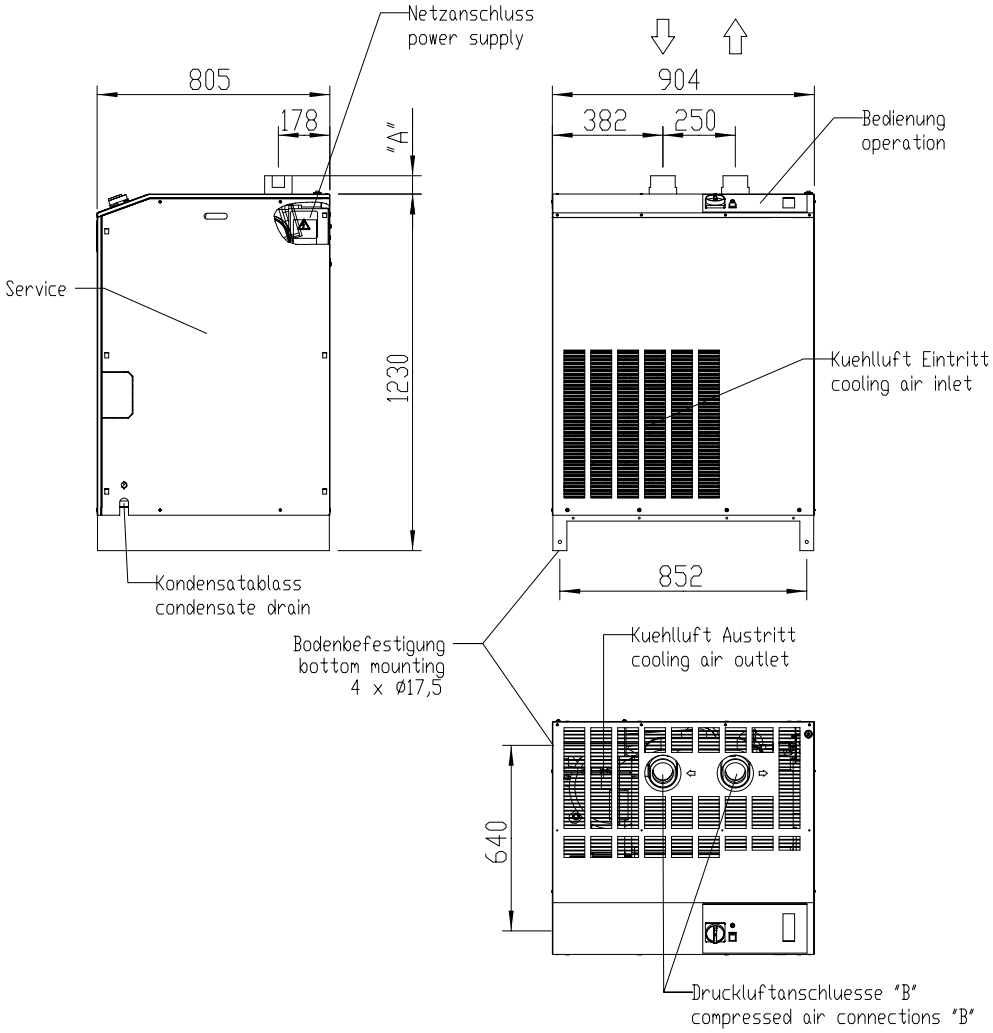
Pressure dew point	°C	3	5	7	10	15
Factor	f_{tpd}	1	1.12	1.24	1.36	1.45

Working overpressure	b a r (g)	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Factor	f_p	0.60	0.70	0.80	0.88	0.94	1.00	1.04	1.06	1.09	1.10	1.12	1.14	1.15	1.16	1.17

Temperature of cooling air or cooling water	°C	25	30	35	40	45	50
Factor	f_{te}	1.00	0.97	0.94	0.87	0.75	0.62

Corrected dryer capacity =
Standard dryer capacity x f_{pg} x f_{te} x f_{ti} x f_{tpd}

Buran DC 1000 AX - DC 1650 AX



Functional diagram