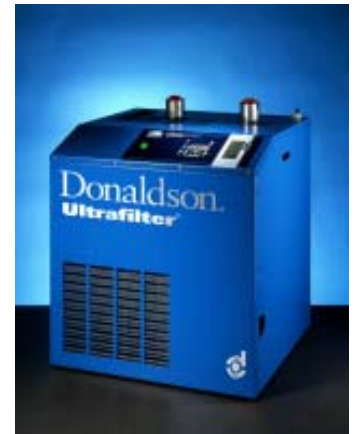


# Buran

## SD 0010 A - 1650 AP

### Refrigeration Compressed Air Dryer for small and medium air flows



#### How does the dryer work?

Compressed air is fed into the dryer and is precooled in the air-to-air heat exchanger by the outgoing cold compressed air. The precooled air then passes through the refrigerant-to-air heat exchanger where it is further cooled to the required pressure dew point. The moisture in the compressed air condenses out and is collected and discharged automatically.

Finally, the cold discharged air is rewarmed by the incoming compressed air. This saves energy and prevents any moisture forming beyond the dryer in the compressed air system.

#### Ultrapulse: State of the art in fridge dryer regulation

This microprocessor based control device is the heart of the new generation of Donaldson fridge dryers. By processing parameters such as cooling temperature, pressure in the fridge circuit as well as dryer specific parameters, the actual operational condition of the dryer is calculated by the electronic. If the measured data admit, the fridge compressor will be shut off for a precalculated period.

The pulsating measuring of the temperature (several times per second) and the use of the aluminium heat exchanger as a storage mass ensures a quick response to load changes without tolerating dew point peaks exceeding the set nominal pressure dew point value. In addition, the Ultrapulse controls and monitors the condensate drain which works without loss of compressed air.

#### Additional advantages of this dryer generation:

- Ultrapulse from SD 0080 AP as standard
- Multi Functional Display
- Load controlled energy consumption, reduction up to 90 % of nominal energy consumption
- Load controlled drain
- Low voltage monitoring
- Display is changeable from °C to °F
- Optional: Dry contact for alarm signal and analog signal 0-10V for dew point temperature
- Max. operation parameter, inlet temp. 60 °C, ambient temp. 50 °C for the whole series
- One-component refrigerant R134a, Ozone-depleting factor zero
- Compact and easy to install cabinets

#### The Multi Functional Display shows the following parameters:

- Topical pressure dew point
- Operation mode Normal/Summer/Autom.
- Power consumption relate to the whole life time
- Alarm signal
- Alarmhistory
- Maintenance necessary
- Operation status of the drain
- Operation hours
- Fridge compressor on/off
- Topical energy consumption

Technical Data										
Model	Air flow	Air flow	Pressure drop	Power supply	Power consumption kW			Cooling air required	Cooling water required	
	m³/h	m³/min	bar	V/50Hz	100 % Full load	50% Part load	0% Zero load	m³/h	m³/h	
SD 0010 A	10	0.17	0.11	230	0.13	0.11	0.10	260	-	
SD 0015 A	15	0.25	0.18	230	0.14	0.12	0.11	260	-	
SD 0025 A	25	0.42	0.19	230	0.15	0.13	0.11	240	-	
SD 0035 A	35	0.58	0.28	230	0.16	0.14	0.12	240	-	
SD 0050 A	50	0.83	0.26	230	0.25	0.22	0.19	450	-	
SD 0065 A	65	1.08	0.32	230	0.27	0.24	0.20	450	-	
SD 0080 AP	80	1.33	0.10	230	0.33	0.18	0.03	450	-	
SD 0100 AP	100	1.67	0.14	230	0.35	0.19	0.04	740	-	
SD 0125 AP	125	2.08	0.22	230	0.46	0.25	0.05	740	-	
SD 0150 AP	150	2.50	0.25	230	0.70	0.40	0.07	1000	-	
SD 0175 AP	175	2.92	0.28	230	0.74	0.41	0.08	1000	-	
SD 0225 AP	225	3.75	0.23	230	0.76	0.39	0.08	1300	-	
SD 0300 AP	300	5.00	0.24	230	0.88	0.48	0.09	920	-	
SD 0375 AP	375	6.25	0.29	230	0.95	0.50	0.09	920	-	
SD 0450 AP	450	7.50	0.15	230	1.08	0.59	0.11	920	-	
SD 0550 AP	550	9.17	0.23	400	1.25	0.69	0.13	2900	-	
SD 0650 AP	650	10.83	0.20	400	1.28	0.70	0.13	2900	-	
SD 0750 AP	750	12.50	0.26	400	1.45	0.80	0.15	2900	-	
SD 0850 AP	850	14.17	0.29	400	1.80	0.99	0.18	2600	-	
SD 1000 AP	1000	16.67	0.27	400	2.40	1.32	0.24	3100	-	
SD 1175 AP	1175	19.58	0.29	400	2.56	1.41	0.26	2600	-	
SD 1350 AP	1350	22.50	0.21	400	2.80	1.54	0.28	2600	-	
SD 1500 AP	1500	25.00	0.25	400	2.95	1.65	0.30	2600	-	
SD 1650 AP	1650	27.50	0.26	400	3.10	1.71	0.31	2600	-	

**Explanations:**

Volume flow (m³/h) in relation to intake state of air compressor +20°C, 1 bar, at compressed-air entry temperature of +35°C, ambient temperature of +25°C and an operating pressure of 7 bar, +3°C pressure dew point in accordance with DIN ISO 7183.

<b>Operating pressure:</b>
max. 16 bar

<b>Inlet temperature:</b>
max. +60°C

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

<b>Protection class:</b>	<b>Noise pressure level:</b>
IP 20	dB ( A ) < 70

<b>Working pressure</b>	bar g	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
<b>Factor</b>	f <sub>p</sub>	0.60	0.70	0.80	0.88	0.94	1.0	1.04	1.06	1.09	1.10	1.12	1.14	1.15	1.16	1.17

<b>Compressed air inlet temperature</b>	°C	30	35	40	45	50	55	60
<b>Factor</b>	f <sub>ti</sub>	1.28	1.00	0.90	0.82	0.58	0.48	0.38

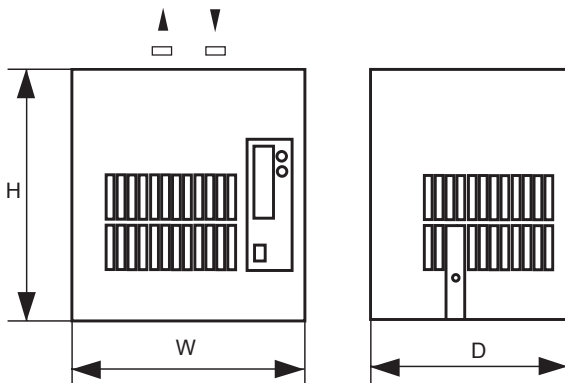
<b>Ambient temperature</b>	°C	25	30	35	40	45	50
<b>Factor</b>	f <sub>ta</sub>	1.00	0.97	0.94	0.87	0.75	0.62

<b>Dew Point</b>	°C	3	5	7	10	15
<b>Factor</b>	f <sub>tc</sub>	1.00	1.12	1.24	1.36	1.45

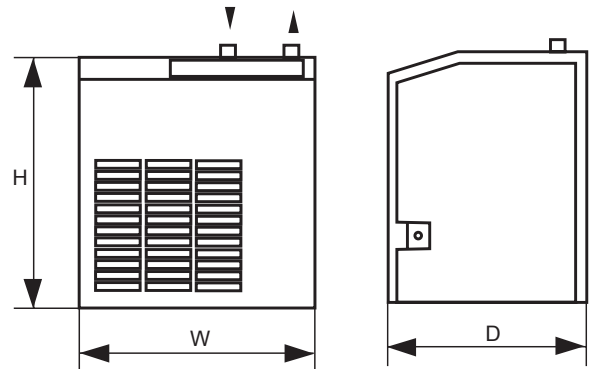
Korrigierte Trocknerleistung =  
 Standard Trocknerleistung x f<sub>p</sub> x f<sub>ta</sub> x f<sub>tc</sub> x f<sub>ti</sub>

# Dimension Sheet

## Buran SD 0010A - 1650AP



**Buran Compact**



**Buran Classic**

Dimensions							
Model	Air connection	Condensate outlet	Weight	Dimensions			
	BSP	R	kg	Width	Height	Depth	
<b>Compact</b>	SD 0010 A	3/8"	1/4"	22	350	375	300
	SD 0015 A	3/8"	1/4"	23	350	375	300
	SD 0025 A	1/2"	1/4"	25	350	400	350
	SD 0035 A	1/2"	1/4"	26	350	400	350
	SD 0050 A	3/4"	1/4"	40	450	500	450
	SD 0065 A	3/4"	1/4"	41	450	500	450
	SD 0080 AP	3/4"	1/4"	44	450	500	450
<b>Classic</b>	SD 0100 AP	1"	1/4"	48	600	550	450
	SD 0125 AP	1"	1/4"	50	600	550	450
	SD 0150 AP	1"	1/4"	52	600	550	450
	SD 0175 AP	1"	1/4"	53	600	550	450
	SD 0225 AP	1 1/2"	1/4"	70	600	650	600
	SD 0300 AP	1 1/2"	1/4"	80	600	650	600
	SD 0375 AP	1 1/2"	1/4"	95	600	650	600
	SD 0450 AP	1 1/2"	1/4"	97	600	650	600
	SD 0550 AP	2"	1/4"	150	900	1230	800
	SD 0650 AP	2"	1/4"	152	900	1230	800
	SD 0750 AP	2"	1/4"	166	900	1230	800
	SD 0850 AP	2"	1/4"	175	900	1230	800
	SD 1000 AP	2 1/2"	1/4"	177	900	1230	800
	SD 1175 AP	2 1/2"	1/4"	180	900	1230	800
	SD 1350 AP	2 1/2"	1/4"	185	900	1230	800
SD 1500 AP	2 1/2"	1/4"	190	900	1230	800	
SD 1650 AP	2 1/2"	1/4"	196	900	1230	800	

Technical alterations reserved (TS/2006/03/28)