



Donaldson
FILTRATION SOLUTIONS

Technical Data Sheet: BURAN

Watercooled Refrigerations Com- pressed Air Dryers DC 0490 WX - DC 1650 WX

MAIN FEATURES & BENEFITS:

- Low electrical power consumption
- Low pressure drop
- Zero loss drains (electronic level controlled)
- Ozone friendly refrigerant R407C
- Constant pressure dew point
- Service friendly

Buran, water-cooled



INDUSTRIES:



- Chemical and pharmaceutical industry



- Food and beverage industry



- Paint and finish industry



- Environmental industry



- Machine building industry and
plant engineering / construction

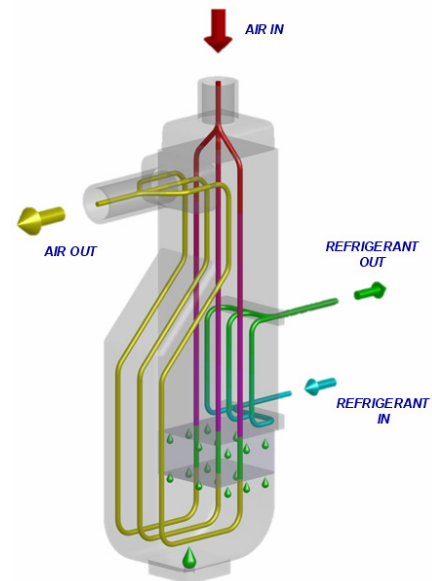
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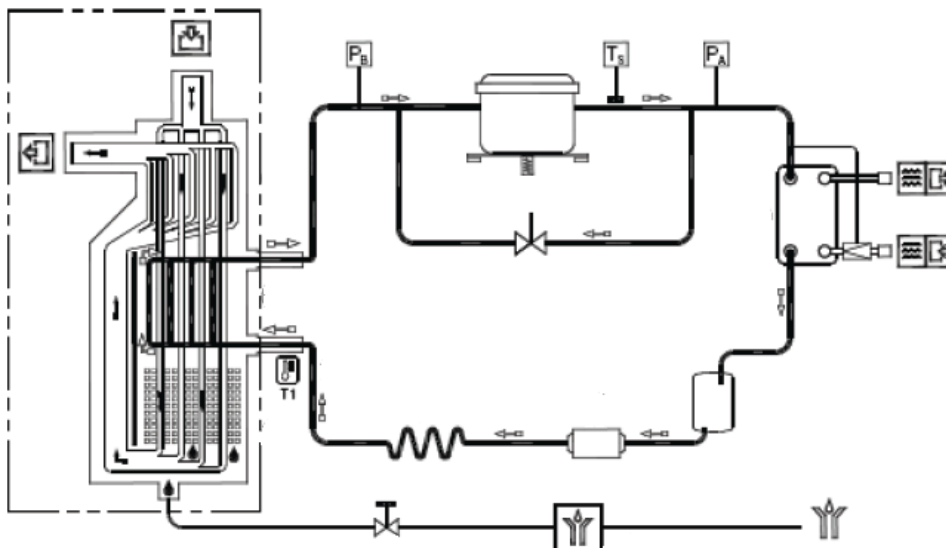
Donaldson[®]
Ultrafilter

PRODUCT DESCRIPTION:

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 hot gas bypass which assures the dryer functionality for partial loads, too.



FUNCTIONAL DIAGRAM:



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

colour: RAL 5019
capri blue

PRODUCT SPECIFICATIONS:

Features Buran dryers	Benefits
Aluminium heat exchanger	No corrosion inside the heat exchanger due to the contact with wet compressed air
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).
Potential free alarm contact	Economical operation and safe system installation in the compressed air network
RS 485 serial port (from DC 1080 WX)	Remote control. connection to supervisors PC

DRYER DESIGN AND PERFORMANCE DATAS:

Medium	Compressed air
Operating pressure:	max. 14 bar (ü)
Medium temperature:	max. +70 °C
Ambient temperature:	min. +1 °C / max. +50 °C
Protection class:	IP 40
Refrigerant:	R407C
Noise pressure level:	< 70dB (A) in 1m distance

type	volume flow*	volume flow*	pressure drop	power supply	energy consumption	cooling water requirement	air connections	weight	cool water connections
	m³/h	m³/min	bar	V/Ph/Hz	kW	m³/h	BSP	kg	BSP
DC 0490 WX	490	8,17	0,09	230/1/50	0,83	0,13	G 2"	89	G 1/2"
DC 0630 WX	630	10,50	0,13	230/1/50	0,95	0,16	G 2"	91	G 1/2"
DC 0750 WX	750	12,50	0,07	230/1/50	1,15	0,20	G 2 1/2"	138	G 3/4"
DC 0870 WX	870	14,50	0,13	230/1/50	1,23	0,21	G 2 1/2"	147	G 3/4"
DC 0960 WX	960	16,00	0,15	230/1/50	1,32	0,27	G 2 1/2"	158	G 3/4"
DC 1080 WX	1080	18,00	0,17	400/3/50	1,88	0,29	DN 80	225	G 3/4"
DC 1260 WX	1260	21,00	0,21	400/3/50	2,32	0,35	DN 80	227	G 3/4"
DC 1500 WX	1500	25,00	0,13	400/3/50	2,40	0,42	DN 80	256	G 3/4"
DC 1650 WX	1650	27,50	0,16	400/3/50	2,65	0,59	DN 80	257	G 3/4"

*according to ISO 7183 @ 7 barg

Correction factor for operating pressure changes	barg	4	5	6	7	8	10	12	14
Factor	(F1)	0,77	0,86	0,93	1,00	1,05	1,14	1,21	1,27

Correction factor cooling water inlet temperature changes	°C	25	30	35
Factor	(F2)	1,00	0,96	0,90

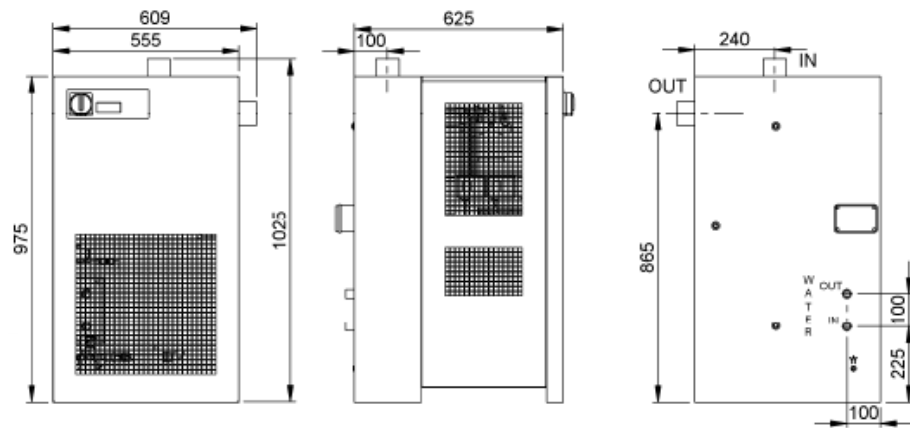
Correction factor for DewPoint changes:	°C	3	5	7	10
Factor	(F4)	1	1,09	1,19	1,37

Correction factor for inlet air temperature changes:	°C	≤ 25	30	35	40	45	50	55	60	65	70
Factor	(F3)	1,20	1,12	1,00	0,83	0,69	0,59	0,50	0,44	0,39	0,37

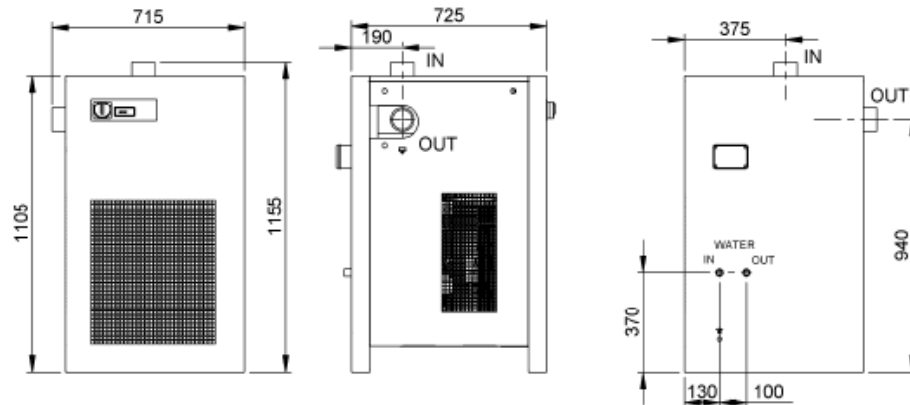
Corrected dryer capacity = Standard dryer capacity x (F1) x (F2) x (F3) x (F4)

DIMENSIONS:

DC0490WX - DC0630WX



DC0750WX - DC0960WX



DC1080WX - DC1650WX

