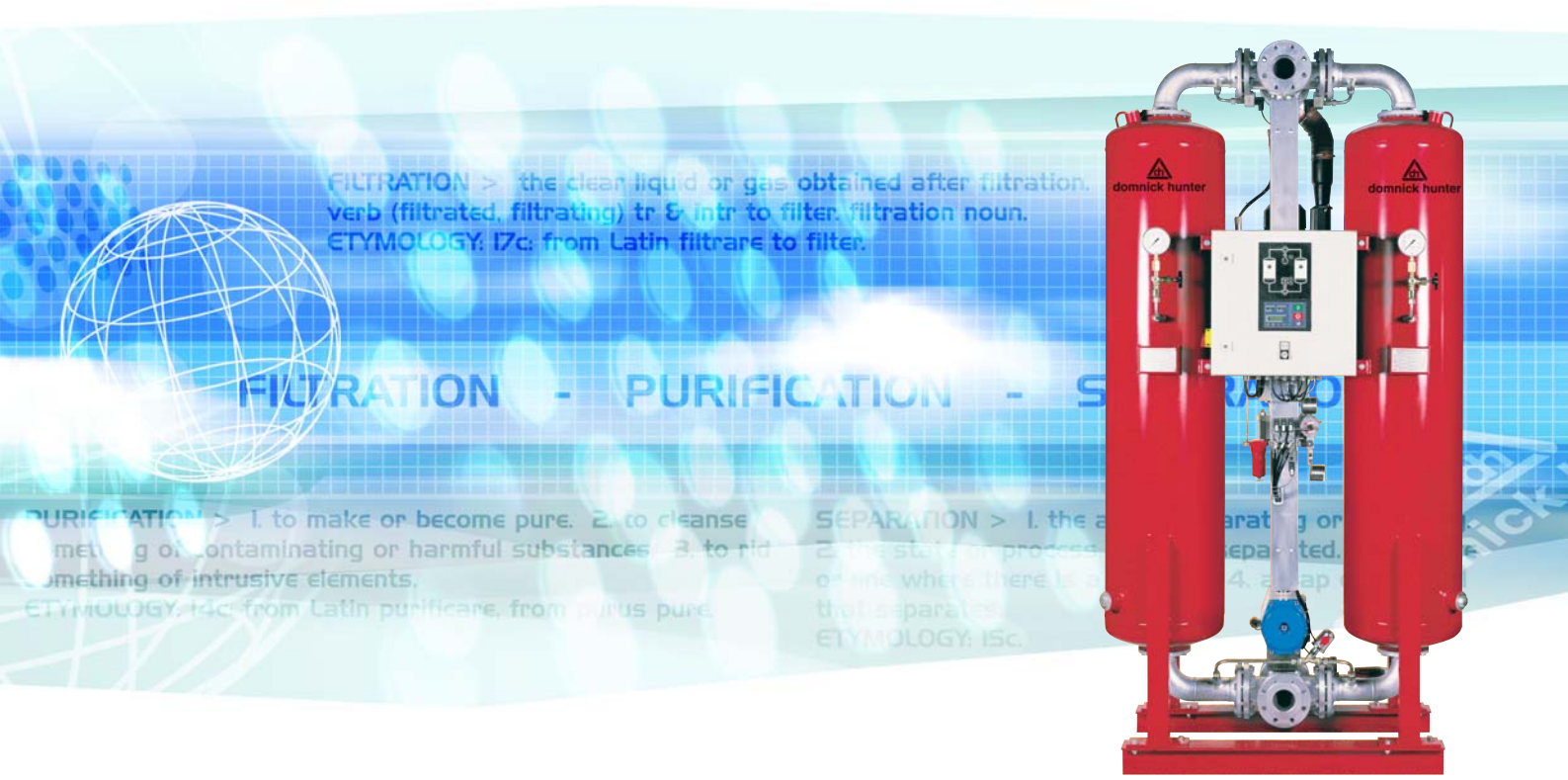
domnick hunter



DTV Zero Purge
Compressed air dryers

PATENTED
vacuum
TECHNOLOGY

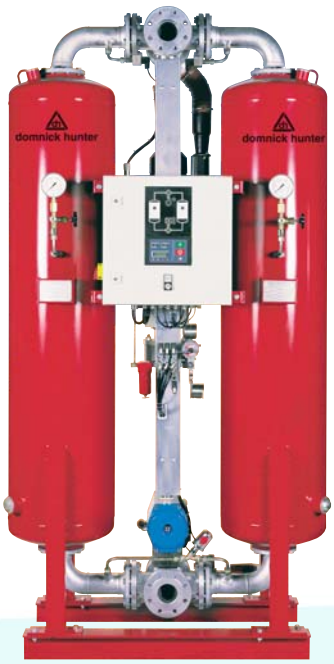
www.domnickhunter.com

Modern production systems and processes demand high levels of air quality. Total elimination of moisture from your compressed air system will provide reliability of production processes and products.

The efficient solution

domnick hunter DTV zero purge, vacuum heat regenerative dryers represent the most cost effective, energy efficient solution for the provision of high quality, clean, dry compressed air.

Using patented domnick hunter technology, zero purge dryers provide the ultimate in uncompromising performance, reliability and security for your compressed air system.



PATENTED vacuum TECHNOLOGY

Benefits

- **Highest quality clean, dry and oil-free compressed air**

Vacuum Technology

- **Zero Purge Guaranteed**

  Zero air loss provides lowest operating cost.
  100% utilisation of clean dry compressed air.
  No need for additional compressed air capacity.

- **Low Cost Regeneration**

  Energy savings are achieved due to low regeneration temperatures.

  Less Energy is used during cooling, due to optimised vacuum circuit.

- **Dewpoint Performance**

  Reliable dewpoints down to –70ºC

  Two layered desiccant bed provides optimum dewpoint stability.

- **Long Service Life**

  Extended service life of key components due to reduced temperature stress during operation.

- **Low pressure drop**
  Improved plant efficiency and process reliability.

- **Approved to international standards**
  Vessel Codes to CE, PED, BS5500 ASME.

- **Easy and flexible installation**
  Minimal space required.

- **Protects compressed air system**
  Moisture free systems increase reliability of processes, give a better quality of finished products and prevents damage to your compressed air system.

Vacuum technology
How it works

The high efficiency desiccant bed removes moisture from the wet compressed air by adsorption. It effectively combines water resistant and high efficiency desiccant to achieve low energy costs, long service life and constant dewpoint performance.

Vacuum Regeneration

Vacuum technology combined with low regeneration temperatures results in high-efficiency, low energy drying.

Active Heating

DTV dryers operate with negative regeneration pressures. Heating desiccant under vacuum conditions ensures low cost desiccant reactivation due to the low steam vapour temperature.

Intensive Cooling

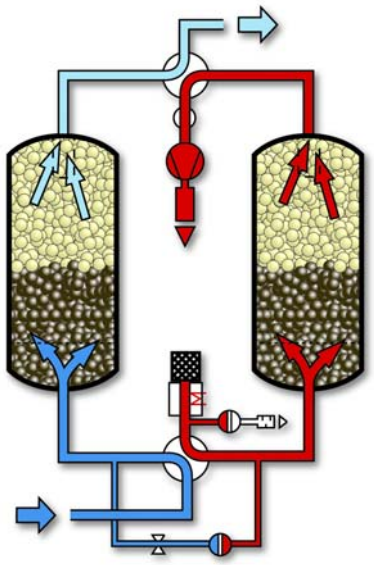
Cooling air flows through the dryer in the same direction as the dried compressed air. Reducing moisture loadings, shortening cooling times and lowering energy used. NO expensive compressed air is required for cooling or purge.

Microprocessor Control

A microprocessor control system is installed on all DTV dryers. The dryer adapts easily and quickly to plant demands and only uses the energy required for the operating conditions. A data logging system records all functions and can be linked to a BMS system.

Dewpoint Dependent Switching

The (optional) Dewpoint Dependent Switching (DDS) system, allows the cost of drying compressed air to be matched exactly to the conditions in the compressed air plant. DDS controls the cycle times of the dryer to suit actual plant conditions by continuously measuring the loading under which the dryer is operating and optimising the energy input required, dramatically reducing operating costs.



Technical specifications

Pressure Dewpoint:	-40˚C (-40˚F) Nominal -25˚C (-13˚F) Optional -70˚C (-100˚F) Optional
Air Quality Class:	ISO 8573.1 Class 1.2.1. Nominal ISO 8573.1 Class 1.3.1. Optional ISO 8573.1 Class 1.1.1. Optional

Maximum Operating Pressure:	10 bar g (145 psi g) Standard 16 bar g (232 psi g) Optional
Minimum Operating Pressure:	4 bar g (73 psi g)
Maximum Inlet Temperature:	40˚C (122˚F)
Minimum Inlet Temperature:	2˚C (36˚F)
Controls:	Microprocessor or PLC
Standard Electrical Supply:	400V/3Ph/50Hz

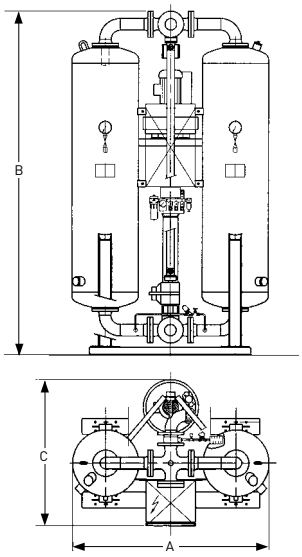
Model	Flow Rate* @ 7 bar g Inlet temp. 35°C		Dimensions in mm			Air Connection	Weight kg	Average Power kW/h @ Dewpoint	
	cfm	m³/h	A	B	C			-25°C	-40°C
DTV 19	247	420	1215	1955	985	DN 40	460	3.1	3.4
DTV 22	300	510	1215	2205	985	DN 40	560	3.8	4.1
DTV 28	377	640	1305	2250	1085	DN 50	640	5.2	5.5
DTV 34	500	850	1360	2275	1095	DN 50	770	6.7	7.2
DTV 43	695	1180	1560	2665	1295	DN 80	940	10.9	11.8
DTV 47	883	1500	1610	2680	1285	DN 80	1200	12.8	13.0
DTV 55	1165	1980	1700	2730	1390	DN 80	1580	16.3	17.5
DTV 59	1383	2350	2020	2845	1415	DN 100	1880	18.1	19.5
DTV 65	1725	2930	2085	2870	1515	DN 100	2350	22.5	24.2
DTV 70	2089	3550	2170	2950	1630	DN 100	2850	27.9	29.3
DTV 73	2413	4100	2450	3190	1630	DN 150	3300	32.5	34.2
DTV 79	2790	4740	2515	3210	1835	DN 150	3800	38.9	40.2
DTV 82	3090	5250	2550	3230	1770	DN 150	4200	44.8	45.2
DTV 88	3655	6210	2600	3500	1885	DN 150	4950	52.3	53.2
DTV 91	4179	7100	2650	3520	1905	DN 150	5700	56.3	57.0
DTV 94	4709	8000	3210	3585	2115	DN 200	6400	67.2	67.8
DTV 97	5415	9200	3150	3615	2240	DN 200	7400	75.6	76.8
DTV 100	6357	10800	3250	3670	2290	DN 200	8700	85.3	87.9
DTV 103	7240	12300	3500	3860	2480	DN 250	11500	98.9	105.0
DTV 106	8534	14500	3600	3900	2530	DN 250	13500	111.4	119.9

**Referenced to 20˚C (68˚F) and 1 bar a (14.5 psi a)*

Correct Dryer Selection

1. Select your correction factor for minimum pressure to inlet of dryer
   (Allow for system pressure losses when determining minimum operating pressure).

Inlet Pressure	bar g	4	5	6	7	8	9	10
Inlet Temperature	30°C	0.69	0.80	0.90	1.02	1.06	1.17	1.29
	35°C	0.44	0.62	0.80	1.00	1.05	1.16	1.28
	40°C	0.28	0.42	0.59	0.70	0.79	0.88	0.96



domnick hunter service

A wide range of domnick hunter preventative maintenance programs are available.

Comprehensive worldwide service packages that can be tailored to match your exact requirements.

Benefits:

- **Priority response to any service call**
- **Planned maintenance**
- **Trained specialists**
- **Global coverage**

ISO 9001 REGISTERED FIRM
Q 5240
Since 1987

domnick hunter limited
Dukesway, Team Valley Trading Estate,
Gateshead, Tyne and Wear,
England NE11 0PZ
Tel: +44 (0)191 402 9000
Telefax: +44 (0)191 482 6296
http://www.domnickhunter.com

Publication Reference: 72 09/03 Rev. 5
Stock No. 17 400 4472