

ENERGY-SAVING REFRIGERATION DRYER

FOR OPERATING PRESSURES UP TO 16 BAR

Intelligent control strategy adjust the energy requirements of the compressed air refrigeration dryer BT ES/VS directly to the compressed air flow rate, thereby significantly reducing energy demand.

The BT 21 - 960 ES models operate as cycling dryers, where the coolant compressor is turned off as required. The intelligent cycling system

operates, depending on the drying needs, and is regulated so as to ensure optimum extension of off-times.

The BT 1260 - 8800 VS models reach high energy savings with fluctuating drying requirements by using a unique combination of frequency and downtime control.

- + Percentage-based energy conservation display
- + Potential-free contact for alarm transmission
- + Standard with electronic level-controlled steam trap

Energy requirements are adjusted on the basis of dryer capacity. The BT-ES models are controlled on the basis of the operating cycle by switching on and off of the refrigerant compressor, BT-VS models via frequency regulation of the refrigerant compressor and of the ventilator

Maximum heat transmission via air-air heat exchanger: This has a direct effect on energy consumption reduction

Vertically-arranged stainless steel demister for safe separation. Wet compressed air is directed to the automatic steam trap



The generously sized cross sections of the flow channels in the heat exchanger result in low flow rates and low energy demands

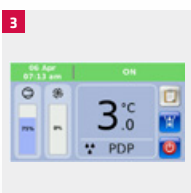
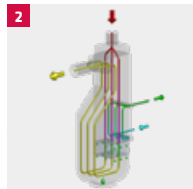
A high-volume settling chamber prevents the carrying away of condensation

The exchange of heat in the countercurrent and generous dimensions permit complete evaporation of the refrigerant

Use of environmentally-friendly coolants: FCKW-free in accordance with the F-Gas Regulation

Illustration shows: Compressed-air refrigeration dryer BT-ES

HIGHLIGHTS IN DETAIL



1 Standard equipped with electronic level-controlled steam trap, discharge of air pressure condensate without loss of air pressure.

2 Air/Air and Refrigerant/Air heat exchanger including demister integrated in single casing to save space.

3 Intelligent adjustment of dryer performance to air pressure consumption, as well as of the entry and environmental conditions, permits optimum energy conservation, shown as a percentage on the control unit display.

AIR DRYER BT ES/VS 21-8800 M³/H

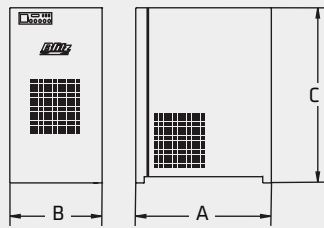
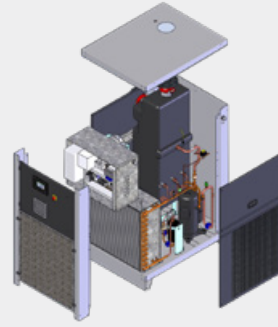


Illustration shows: BT-V5



Model	BT ES					
Max. volume flow (m ³ /h)*	21	33	51	72	108	138
Operating pressure (bar)	16	16	16	16	14	14
Power consumption (kW)	0,16	0,18	0,22	0,23	0,31	0,46
Power supply (V/Hz)	230/1/50-60	230/1/50-60	230/1/50-60	230/1/50-60	230/1/50-60	230/1/50-60
Connection (inch)	1/2	1/2	1/2	1/2	1	1
A Length (mm)	420	420	420	420	420	420
B Width (mm)	345	345	345	345	345	345
C Height (mm)	740	740	740	740	740	740
Weight (kg)	28	29	31	34	36	37
Article number	126619	126620	126621	126622	126623	126624

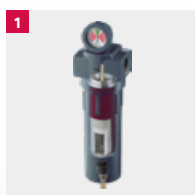
Model	BT ES								
Max. volume flow (m ³ /h)*	186	240	330	372	486	630	750	870	960
Operating pressure (bar)	14	14	14	14	14	14	14	14	14
Power consumption (kW)	0,69	0,75	0,7	0,84	0,98	1,1	1,45	1,52	1,73
Power supply (V/Hz)	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50	230/1/50
Connection (inch)	1/1/4	1/1/4	1/1/2	1/1/2	G2	G2	G2 1/2	G2 1/2	G2 1/2
A Length (mm)	455	455	580	580	625	580	725	725	725
B Width (mm)	485	485	555	555	555	555	665	665	665
C Height (mm)	825	825	885	885	975	975	1105	1105	1105
Weight (kg)	46	50	55	63	92	94	141	150	161
Article number	126625	126626	126627	126628	126629	126630	126631	126632	126633

Model	BT VS											
Max. volume flow (m ³ /h)*	1260	1800	2200	2400	3000	3600	4400	5400	6600	7200	8800	
Operating pressure (bar)	14	14	14	14	14	14	14	14	14	14	14	
Power consumption (kW)	2,75	3,3	3,8	4,6	4,7	6,1	6,9	8,74	11,23	11,78	17,45	
Power supply (V/Hz)	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	400/3/50-60	
Connection (inch)	DN80	DN80	DN80	DN100	DN100	DN100	DN100	DN150	DN150	DN200	DN200	
A Length (mm)	1000	1000	1000	1205	1205	1205	1205	1750	1750	1870	1870	
B Width (mm)	790	790	790	1135	1135	1135	1135	1300	1300	1400	1400	
C Height (mm)	1465	1465	1465	1750	1750	1750	1750	1810	1810	2200	2200	
Weight (kg)	248	282	317	470	545	549	621	830	940	1055	1055	
Article number	126634	126635	126636	126637	126638	126639	126640	126641	126642	126643	126644	

* according to ISO 7183; volume flow m³/h referred to +20°C at 1bar; operating pressure 7bar; compressed air inlet temperature +35°C; ambient temperature +25°C; pressure dew point +5°C

Correction factor	BT ES/VS										
Inlet pressure	bar	4	5	6	7	8	10	12	14	15	16
Correction factor		0,77	0,86	0,93	1,00	1,05	1,14	1,21	1,27	1,30	1,33
Ambient temperature	°C	25	30	35	40	45	50				
Correction factor (BT 21-960 ES)		1,00	0,96	0,91	0,85	0,76	0,64				
Correction factor (BT 1260 ES-8800 VS)		1,00	0,95	0,93	0,85	0,73	0,58				
Inlet temperature	°C	25	30	35	40	45	50	55	60		
Correction factor (BT 21-960 ES)		1,27	1,21	1,00	0,84	0,70	0,57	0,48	0,42		
Correction factor (BT 1260 ES-8800 VS)		1,26	1,20	1,00	0,81	0,68	0,57	0,46	0,38		
Pressure dew point	°C	3	5	7	10						
Correction factor		1,00	1,09	1,19	1,37						

ACCESSORIES



1 Optionally available pre- and afterfilter

2 Standard air-cooled design, water cooling optional