AIR PLANT SYSTEM
OIL-FREE TOOTH

Medical Air System
mAIR Medical Air, cAIR Combined Air & sAIR Surgical Air Systems
EN ISO 7396-1/HTM 02-01 and HTM2022 EurPh
400V 60Hz, 4 Bar & 7 Bar Outlet
Oil Free Tooth Compressors

SPECIFICATION

Air Plant System

The Medical Air System is a modular base-mounted design consisting of oil free rotary tooth compressor modules with fixed or variable speed drive, a duplex air purification module with central controller, and air receiver modules. The Air System shall conform to EN ISO 7396-1 and NHS Health Technical Memorandum HTM02-01 or HTM2022. Medical quality air to the European Pharmacopoeia monograph shall be delivered at pressures of 400 kPa (4 bar) or 700kPa (7 bar) gauge for supply of the hospital medical or surgical air systems.

Medical Air Systems shall be duplexed such that any single functional component failure will not affect the integrity of the medical compressed air supply.

Surgical Air Systems shall have a duplex air purification module and a simplex compressor. Additional compressors shall be available to duplex the compressors, such that any single compressor failure will not affect the integrity of the air supply.

The Medical Air Systems are 'CE' marked with approval from a notified body (more detailed information available on request).

Sources of Supply

HTM02-01 and ISO7396-1

The Medical Air Plant System will produce the primary supply with two compressors on standby (unless an automatic manifold is used as secondary (HTM02-01) or third (ISO7396-1) supply). For duplex plant, the secondary (HTM02-01) or third (ISO7396-1) supply shall be an automatic manifold. For triplex plant, each compressor can supply the total hospital flow. If more than three compressors are installed, the total hospital flow will be split over multiple compressors.

HTM2022

The Medical Air Plant System will produce the primary supply with one compressor on standby. For duplex plant, each compressor can supply the total hospital flow. If more than two compressors are installed, the total hospital flow will be split over multiple compressors. The back-up compressor will form the secondary supply. A third supply shall be from an automatic manifold capable of supplying the average hospital demand for 4 hours.

Compressor Modules

Fixed Speed Compressors

Compressors shall be Atlas Copco ZT MED two-stage oil free rotary tooth compressors suitable for both continuous and frequent start/stop operation at a nominal outlet pressure of 850 kPa (8.5 bar) or 1000 kPa (10 bar) gauge. The tooth element shall be stainless steel. The air quality shall be 100% oil free, certified ISO8573-1 Class 0 by an independent agency. The compressor shall have a sound insulating canopy. Compressors shall be supplied with an intercooler and aftercooler with a dedicated radial quiet running fan to maximise cooling and efficiency. Minimum IE3/NEMA Premium electric motors shall be used; motors with lower efficiency ratings are not acceptable. The compressor shall be fitted with a high-definition colour display controller, a dry motor coupling requiring no lubrication and electronic zero-loss water drains. The noise level of the compressor shall be maximum 72dB(A). The compressor shall have the following features as required by HTM02-01/HTM2022:

- Ammeter
- Main switch
- Temperature sensor downstream the aftercooler
- Failed-to-go-on-load feedback pressure switch
- Automatic restart after voltage failure

Variable Speed Compressors

Alternatively, compressors shall be Atlas Copco ZT VSD MED two-stage oil free rotary tooth compressors fitted with Variable Speed Drive. By including an AC-DC converter, along with associated control hardware and software it will enable the compressor to continuously match its running speed with the flow demand required by the hospital. By using such technology, start currents will be reduced, machine life will be prolonged and energy savings of up to 35% shall be achievable. The compressor shall operate from 400- 1000kPa (4-10 bar) gauge.

The tooth element shall be stainless steel. The air quality shall be 100% oil free, certified ISO8573-1 Class 0 by an independent agency. The compressor shall have a sound insulating canopy. Compressors shall be supplied with an intercooler and aftercooler with a dedicated radial quiet running fan to maximise cooling and efficiency. Minimum IE3/NEMA Premium electric motors shall be used; motors with lower efficiency ratings are not acceptable. The compressor shall be fitted with a high-definition colour display controller, a dry motor coupling requiring no lubrication and electronic zero-loss water drains. The noise level of the compressor shall be maximum 72dB(A). The compressor shall have the following features as required by HTM02-01/HTM2022:

- Ammeter
- Main switch
- Temperature sensor downstream the aftercooler
- Failed-to-go-on-load feedback pressure switch
- Automatic restart after voltage failure

Full VSD air plant shall incorporate VSD controllers on all compressors, cycling the lead compressor to ensure even wear as per HTM02-01 requirements.

Air Purification Module

Dryer and filter system

The duplexed air purification module shall incorporate high efficiency water separators, oil coalescing filters, heatless regenerative desiccant dryers, activated carbon filters with optional hopcalite catalyst, bacterial filters and pressure regulators. The performance of the filters shall be according to below specifications:

- Oil coalescing two-in-one high efficiency filter: mass efficiency of 99,991%, tested according to ISO 8573-2 & ISO 12500-1;
- Activated carbon filter: max remaining total oil content of 0,003 mg/m³, tested according to ISO 8573-5 & ISO12500-2;
- Bacterial filter: particle count efficiency of 99,98% at MPPS=0.06µm, tested according to ISO 12500-3.

The dryer shall have a purge valve with multiple orifice sizes to adjust the purge rate, eliminating the need for additional purge plugs. Optional electrical contacts may be installed on the filters to provide warning alarms on the dryer controller in the event of high pressure drop (ie blockage) and shall also include connections for BMS. Contaminants in the delivered air downstream of the bacterial filters shall be maintained at levels below those shown in the table below.

Air Plant Systems with variable speed drive compressors shall be fitted with a hopcalite filter and electrical contacts on the filters as standard.

Model Name	Threshold
H_2O	67 ppm v/v
Dry particulates	Free from visible particulates in a 75 litre sample
Oil (droplet or mist)	0.1 mg/m³
CO	5 ppm v/v
CO_2	500 ppm v/v
SO_2	1 ppm v/v
NO	2 ppm v/v
NO_2	2 ppm v/v

Control System

The cubicle of the medical air purifier shall contain both the central controller as well as the individual dryer controllers.

The central control system shall provide an intelligent human machine interface incorporating on board flash memory and real-time clock for recording operational parameters in the in-built event log. The central control system shall operate at low voltage and include BMS connection for plant fault, plant emergency, reserve fault and pressure fault. Visualisation of plant inputs, outputs and status through a web browser, using a simple Ethernet connection shall be available. The central control unit shall incorporate a user friendly 5.7" high-definition colour display with clear pictograms and LED indicators, providing easy access to system operational information.

The central control system shall employ automatic rotation of the lead compressor & dryer to maximise life and ensure even wear. The compressors & dryers shall be fitted with their own individual controller. These controllers shall be fitted with the necessary logic to act as a back-up in case of a central controller malfunction, ensuring continued operation.

Dryer Purge Control

The dryer control system shall incorporate a Purge Saver Energy Management system that freezes the regeneration of the desiccant once adequate dew point is reached in the inactive tower. Only when the dewpoint level in the active tower deteriorates to an unacceptable level will the intelligent controller switch towers.

Dew Point Monitoring

The dryer shall incorporate a dew point hygrometer with an accuracy of ±3°C in the range -20 to -100°C atmospheric dew point and 4-20mA analogue output. Aluminium oxide or palladium wire sensors are not acceptable. An alarm condition shall trigger on the dryer control panel if the dew point exceeds a -46°C atmospheric set point. The plant control unit shall display the dewpoint of the delivered air to enable monitoring of the air quality by the hospitals estates department. Voltage-free contacts shall be included to enable the dew point alarm signal to be connected to a central medical gas alarm system and/or building management system (BMS). To enable periodic calibration of the dew point sensor element, the hygrometer shall be remotely connected downstream of the dryer via a micro-bore tube. It is not acceptable to install the sensor directly into the medical air supply pipeline.

Receiver Assembly

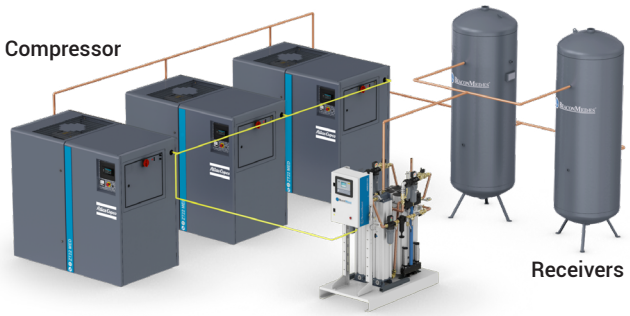
Air receivers shall comply with PED 2014/68/EU, supplied with relevant test certificates. Each air receiver shall be of steel construction with powder coating for protection (CE standard) or shall be hot dip galvanised inside and out (MOM standard) and fitted with a zero loss electronic drain valve. Float type drain valves are not acceptable. The receiver assembly shall be fitted with a pressure safety valve capable of passing the maximum flow output of the compressor at 10% receiver overpressure. The receiver shall be further protected by a safety pressure relief valve and include a pressure gauge.

Optional Items

There shall be the following options available for enhanced operation of the air plant system:

- VSD compressors (harmonics filter standard included for installation close to highly sensitive equipment)
- MOM standard receivers with 3rd party certification, hot dip galvanised steel inside and out
- EWD zero loss electronic water drains for the dMED dryer including secure mounting to the dryer base
- QDT saturation indicators to give clear visual indication of oil carry over to the activated carbon tower (only up to 10bar)
- CO and CO_2 monitors including full integration into the ES-MED central controller giving alarm warnings when unacceptable CO and CO_2 levels are present

Typical Layout



Air Purification Module

Note:

Interconnecting pipework (brown illustration) between components to be made on site and provided by the installer. Controller CAN cables are provided as a 10m assembly with each compressor which can be shortened on site if required.

Unique Selling Proposition

ZT MED Compressor

1. **Certified Class 0**: 100% oil-free air, certified as ISO8573-1 Class 0 by the renowned TÜV institute, eliminates the risk of oil contamination.

2. **Two-stage tooth element**: By using a two-stage element, energy consumption is lower compared to a single stage compression system as no venting of the pressure is required.

3. **Optional Variable Speed Drive**: By adjusting the motor speed, the output flow rate of the compressor is automatically matched with the air demand from the hospital, resulting in energy savings up to 35%.

4. **Fitted for Medical applications**: All HTM compressor requirements like ammeter, aftercooler temperature sensor, failed-to-go-on-load switch, etc. are factory-fitted. Furthermore, specific software safety features are added.

Purifier

1. **Complete Air Purification Package**: Everything to clean the air is pre-piped and wired in a fully duplexed package, with a six-step purification process that provides European Pharmacopeia compliant air (when hopcalite is fitted).

2. **Compact Design**: With the unique design of the extruded aluminum desiccant dryer towers, the air purification package components are compactly configured to minimize footprint without compromising service access.

3. **Ease of Service**: The top loading desiccant cartridges and externally fitted components make servicing the air purification package quick with easy access for all service parts.

4. **Advanced Medical Controls**: The advanced master controller monitors and controls both the compressors and the air purification module. Fitted with redundancy and medical safety features, the controller operates the system efficiently with a very tight pressure band and equalization of running hours on the compressors and dryers.

Compressor Selection Table 60Hz

Fixed Speed

Model Name	ZT15 MED	ZT18 MED	ZT22 MED	ZT30 MED	ZT37 MED	ZT45 MED
Output flow (litres/minute) * 8.6 bar variant	2052	2724	3222	4578	5562	6516
Output flow (litres/minute) * 10 bar variant	1842	2310	2736	n/a	n/a	n/a
Footprint L x W x H (mm)	1760 x 1026 x 1621	1760 x 1026 x 1621	1760 x 1026 x 1621	2005 x 1026 x 1880	2440 x 1026 x 1880	2440 x 1026 x 1880
Compressor weight (kg)	1060	1080	1086	1432	1432	1432
Service connection (mm)	42	42	42	42	42	42
Noise level/pump (dB[A])	67	70	72	66	68	70
Maximum ambient temperature (°C)	46	46	46	46	46	46
Supply voltage (v) **	380	380	380	380	380	380
Supply frequency (Hz)	60	60	60	60	60	60
Nominal motor rating (kW)	15	18	22	30	37	45
Full load current per compressor (A)	32.5	46	54.7	70.7	70.7	109.5
ISO Part Number - 8.6 bar	on request	on request	on request	on request	on request	on request
HTM Part Number - 8.6 bar	on request	on request	on request	on request	on request	on request
ISO Part Number - 10 bar	on request	on request	on request	n/a	n/a	n/a
HTM Part Number - 10 bar	on request	on request	on request	n/a	n/a	n/a

*Output flow stated at reference conditions

** 230V 60 Hz 3 phase available on request

Variable Speed Drive

Model Name	ZT22VSD MED	ZT37VSD MED	ZT55VSD MED
Output flow (litres/minute) * 8.6 bar variant	1206 - 3216	2472 - 5706	2472 - 8328
Output flow (litres/minute) * 10 bar variant	1182 - 2844	n/a	n/a
Footprint L x W x H (mm)	2195 x 1026 x 1621	2440 x 1026 x 1880	2440 x 1026 x 1880
Compressor weight (kg)	1120	1432	1432
Service connection (mm)	42	42	42
Noise level/pump (dB[A])	72	71	71
Maximum ambient temperature (°C)	46	46	46
Supply voltage (v)	380	380	380
Supply frequency (Hz)	60	60	60
Nominal motor rating (kW)	22	37	55
Full load current per compressor (A)	55.5	92.1	138.8
Starting current (A)	nominal	nominal	nominal
ISO Part Number - 8.6 bar	n/a	on request	on request
HTM Part Number - 8.6 bar	n/a	on request	on request
ISO Part Number - 10 bar	on request	n/a	n/a
HTM Part Number - 10 bar	on request	n/a	n/a

*Output flow stated at reference conditions

**Variable speed drive compressor operate from 4-13 bar at 0-100% speed - start currents nominal for VSD

Receiver Selection Table

Steel, powder coated (standard)

Receiver Capacity (litres)	270	500	1000	1500	2000	3000
Maximum working pressure (bar)	11.5	11.5	11.5	11.5	11.5	11.5
Individual Receiver Dimensions (diameter, height, mm)	500/1860	600/1860	790/2110	1000/2090	1000/2590	1200/2744
Receiver Weight (kg)	60	150	210	278	352	537
Receiver pipe size (mm)	28	28	42	42	42	42
Receiver Part Number	4233400922	4233400924	4233400926	4233400928	4233400930	4233400932
Receiver Accessory Kit	8102 3405 90	8102 3405 94	8102 3405 96	8102 3405 98	8102 3406 00	8102 3406 02

Galvanised steel

Receiver Capacity (litres)	270	500	1000	1500	2000	3000
Maximum working pressure (bar)	16.5	16.5	16.5	16.5	16.5	16.5
Individual Receiver Dimensions (diameter, height, mm)	500/1860	600/1860	790/2110	1000/2090	1000/2590	1200/2744
Receiver Weight (kg)	60	150	210	278	352	537
Receiver pipe size (mm)	28	28	42	42	42	42
Receiver Part Number	4233400935	4233400937	4233400939	4233400941	4233400943	4233400945
MOM receive part number	4233401000	4233401001	4233401002	4233401003	4233401004	4233401005
Receiver Accessory Kit	1609104200	1609104000	1609103400	1609103600	1609103800	1609103800

Dryer Selection Table

Dryer Performance Data - 4 bar system

Model Name	dMED 025	dMED 035	dMED 046	dMED 075	dMED 090	dMED 110	dMED 150	dMED 220	dMED 300
Inlet flow (l/m) at 7.5 Bar *	708	991	1274	2124	2549	3115	4248	6230	8495
Output flow (l/m) at 4 bar	581	813	1045	1742	2090	2554	3483	5109	6966
Inlet flow (l/m) at 10 Bar **	963	1359	1756	2917	3483	4276	5833	8523	11638
Output flow (l/m) at 4 bar	836	1181	1527	2535	3024	3715	5068	7402	10109
Part Number - dryer at 4 bar outlet + QDT	8102 3709 63	8102 3709 66	8102 3709 69	8102 3709 75	8102 3709 78	8102 3709 81	8102 3709 84	8102 3709 90	8102 3709 93
Part Number - dryer at 4 bar outlet + QDT hopcalite filter for EurPh	8102 3711 93	8102 3711 96	8102 3711 99	8102 3712 05	8102 3712 08	8102 3712 11	8102 3712 14	8102 3712 20	8102 3712 23

* 7.5 to 4 bar setup is supplied as standard to the above part numbers.

** For 10 to 4 bar order the abve part numbers plus the option 0000 0224 18 (Factory set 10 to 4 bar dryer)

Dryer Performance Data - 7 bar System

Model Name	dMED 025	dMED 035	dMED 046	dMED 075	dMED 090	dMED 110	dMED 150	dMED 220	dMED 300
Inlet flow (l/m) at 10 Bar *	963	1359	1756	2917	3483	4276	5833	8523	10638
Output flow (l/m) at 7 bar	836	1181	1527	2535	3024	3715	5068	7402	10109
Part Number - dryer at 7 bar outlet + QDT	8102 3709 64	8102 3709 67	8102 3709 70	8102 3709 76	8102 3709 79	8102 3709 82	8102 3709 85	8102 3709 91	8102 3709 94
Part Number - dryer at 7 bar outlet + QDT hopcalite filter for EurPh	8102 3711 94	8102 3711 97	8102 3712 00	8102 3712 06	8102 3712 09	8102 3712 12	8102 3712 15	8102 3712 21	8102 3712 24

* 10 to 7 bar setup is supplied as standard to the above part numbers.

Dryer General Data - All types

Model Name	dMED 025	dMED 035	dMED 046	dMED 075	dMED 090
Footprint L x W x H (mm)	1300 x 750 x 1580	1300 x 750 x 1600	1300 x 750 x 1580	1300 x 750 x 1580	1300 x 750 x 1580
Dryer weight (kg)	220	240	280	320	360
Inlet and outlet connections (mm)	28	28	28	28	28
Supply voltage (v)	115/230	115/230	115/230	115/230	115/230
Supply frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Central control supply - single phase (mm^2/Amps)	1.5/1	1.5/1	1.5/1	1.5/1	1.5/1

Model Name	dMED 110	dMED 150	dMED 220	dMED 300
Footprint L x W x H (mm)	1300 x 750 x 1720	1600 x 750 x 1890	1900 x 1080 x 1580	1900 x 1080 x 1920
Dryer weight (kg)	450	510	650	760
Inlet and outlet connections (mm)	28	28	42	42
Supply voltage (v)	115/230	115/230	115/230	115/230
Supply frequency (Hz)	50/60	50/60	50/60	50/60
Central control supply - single phase (mm^2/Amps)	1.5/1	1.5/1	1.5/1	1.5/1

* Output flow stated includes calculated purge lost during the regeneration process of between 15-19% depending on model and inlet pressure.

Notes on plant:

- Design flow in terms of free air delivered after losses at working pressure with the reserve compressor(s) on standby. Tolerance ±5%.
- Component dimensions supplied do not include maintenance access space, and are provided to allow customer to arrange plant components within plant room. Complete installation drawings are available on request. Quote the drawing number required.
- Duplex systems must be installed with a manifold as the third source of supply for HTM02-01 compliance.
- Mean sound level in accordance with ISO 2151.
- Electrical details are provided for guidance only. Site conditions may impose a larger cable size. For exact cable sizing and fuse/MCB ratings, consult a qualified electrical engineer.

dMED Air Purifier Options	
CO sensor for dMED Air Purifier	0000 0224 27
CO_2 sensor for dMED Air Purifier	0000 0224 28
CO_2 & CO sensor for dMED Air Purifier	0000 0224 29
EWD on WSD and filters (24V), 025-090	0000 0224 08
EWD on WSD and filters (24V), 110-300	0000 0224 09
QDT saturation indicator	0000 0203 59

* Only up to 10bar

Factory set 10 to 4 bar dryer	0000 0224 18

Air Plant Selection Table

HTM02-01 Medical Air 4 bar - 60Hz

ZT MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)

Model Name	mAIR-TZF	mAIR-TZF	mAIR-TZF	mAIR-QZF	mAIR-QZF	mAIR-QZF	mAIR-PZF
Model Description	mAIR-TZF4-1593 HTM02-01 60Hz	mAIR-TZF4-2000 HTM02-01 60Hz	mAIR-TZF4-2457 HTM02-01 60Hz	mAIR-QZF4-3339 HTM02-01 60Hz	mAIR-QZF4-4327 HTM02-01 60Hz	mAIR-QZF4-5109 HTM02-01 60Hz	mAIR-PZF4-6966 HTM02-01 60Hz
Design Flow (L/min) *	1593	2000	2457	3339	4327	5109	6966
Number of compressors	3	3	3	4	4	4	5
Type of compressor	ZT MED15 8.6 Bar	ZT MED18 8.6 Bar	ZT MED22 8.6 Bar	ZT MED15 8.6 Bar	ZT MED18 8.6 Bar	ZT MED22 8.6 Bar	ZT MED22 8.6 Bar
Type of dryer	dMED 090 7.5-4	dMED 110 7.5-4	dMED 150 7.5-4	dMED 150 7.5-4	dMED 220 7.5-4	dMED 220 7.5-4	dMED 300 7.5-4
Number of receivers	2	2	2	2	2	2	2
Receiver volume (l) (each)	500 11 Bar	500 11 Bar	1000 11 Bar	1000 11 Bar	1500 11 Bar	1500 11 Bar	2000 11 Bar
Part Number (With Vessels)	4233600900	4233600901	4233600902	4233600903	4233600904	4233600905	4233600906
Part Number (Without Vessels)	4233601274	4233601275	4233601276	4233601277	4233601278	4233601279	4233601280

* Actual Plant Flow is equal to Design Flow (DF)

HTM02-01 Combined Medical & Surgical Air 7 bar - 60Hz

ZT MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)

Model Name	cAIR-TZF	cAIR-TZF	cAIR-TZF	cAIR-QZF	cAIR-QZF	cAIR-QZF	cAIR-PZF
Model Description	cAIR-TZF7-1760 HTM02-01 60Hz	cAIR-TZF7-2322 HTM02-01 60Hz	cAIR-TZF7-2744 HTM02-01 60Hz	cAIR-QZF7-3715 HTM02-01 60Hz	cAIR-QZF7- 4644 HTM02-01 60Hz	cAIR-QZF7-5242 HTM02-01 60Hz	cAIR-PZF7-8906 HTM02-01 60Hz
Design Flow (L/min) *	1760	2322	2744	3715	4644	5242	8906
Actual Plant Flow (L/min)	1460	1928	2277	3123	3855	4351	6679
Number of compressors	3	3	3	4	4	4	5
Type of compressor	ZT MED15 10 Bar	ZT MED18 10 Bar	ZT MED22 10 Bar	ZT MED15 10 Bar	ZT MED18 10 Bar	ZT MED22 10 Bar	ZT MED22 10 Bar
Type of dryer	dMED 075 10-7	dMED 075 10-7	dMED 090 10-7	dMED 110 10-7	dMED 150 10-7	dMED 220 10-7	dMED 300 10-7
Number of receivers	2	2	2	2	3	3	3
Receiver volume (l) (each)	1000 11 Bar	1500 11 Bar	1500 11 Bar	2000 11 Bar	1500 11 Bar	1500 11 Bar	3000 11 Bar
Part Number (With Vessels)	4233600907	4233600908	4233600909	4233600910	4233600911	4233600912	4233600913
Part Number (Without Vessels)	4233601281	4233601282	4233601283	4233601284	4233601285	4233601286	4233601287

* Plant based on a 50/50 split of medical and surgical air design flow.

HTM2022 Medical Air 4 bar - 60Hz
ZT MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)

Model Name	mAIR-DZF	mAIR-DZF	mAIR-DZF	mAIR-TZF	mAIR-TZF	mAIR-TZF	mAIR-QZF
Model Description	mAIR-DZF4-1593 HTM2022 60Hz	mAIR-DZF4-2000 HTM2022 60Hz	mAIR-DZF4-2457 HTM2022 60Hz	mAIR-TZF4-3339 HTM2022 60Hz	mAIR-TZF4-4327 HTM2022 60Hz	mAIR-TZF4-5109 HTM2022 60Hz	mAIR-QZF4-6966 HTM2022 60Hz
Design Flow (L/min) *	1593	2000	2457	3339	4327	5109	6966
Number of compressors	2	2	2	3	3	3	4
Type of compressor	ZT MED15 8.6 Bar	ZT MED18 8.6 Bar	ZT MED22 8.6 Bar	ZT MED15 8.6 Bar	ZT MED18 8.6 Bar	ZT MED22 8.6 Bar	ZT MED22 8.6 Bar
Type of dryer	dMED 090 7.5-4	dMED 110 7.5-4	dMED 150 7.5-4	dMED 150 7.5-4	dMED 220 7.5-4	dMED 220 7.5-4	dMED 300 7.5-4
Number of receivers	1	1	1	1	1	1	2
Receiver volume (l)(each)	1000 11 Bar	1000 11 Bar	1500 11 Bar	2000 11 Bar	3000 11 Bar	3000 11 Bar	2000 11 Bar
Part Number (With Vessels)	4233600942	4233600943	4233600944	4233600945	4233600946	4233600947	4233600948
Part Number (Without Vessels)	4233601316	4233601317	4233601318	4233601319	4233601320	4233601321	4233601322

* Actual Plant Flow is equal to Design Flow (DF)

HTM2022 Combined Medical & Surgical Air 7 bar - 60Hz
ZT MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)

Model Name	cAIR-DZF	cAIR-DZF	cAIR-DZF	cAIR-TZF	cAIR-TZF	cAIR-TZF	cAIR-QZF	cAIR-HZF
Model Description	cAIR-DZF7-1527 HTM2022 60Hz	cAIR-DZF7-1928 HTM2022 60Hz	cAIR-DZF7-2354 HTM2022 60Hz	cAIR-TZF7-3000 HTM2022 60Hz	cAIR-TZF7-3715 HTM2022 60Hz	cAIR-TZF7-4707 HTM2022 60Hz	cAIR-QZF7-7087 HTM2022 60Hz	cAIR-HZF7-10021 HTM2022 60Hz
Design Flow (L/min) *	1527	1928	2354	3000	3715	4707	7087	10021
Number of compressors	2	2	2	3	3	3	4	6
Type of compressor	ZT MED15 10 Bar	ZT MED18 10 Bar	ZT MED22 10 Bar	ZT MED15 10 Bar	ZT MED18 10 Bar	ZT MED22 10 Bar	ZT MED22 10 Bar	ZT MED18 10 Bar
Type of dryer	dMED 046 10-7	dMED 075 10-7	dMED 075 10-7	dMED 110 10-7	dMED 110 10-7	dMED 150 10-7	dMED 220 10-7	dMED 300 10-7
Number of receivers	1	1	1	1	1	1	2	2
Receiver volume (l) (each)	1000 11 Bar	1000 11 Bar	1500 11 Bar	1500 11 Bar	2000 11 Bar	3000 11 Bar	2000 11 Bar	3000 11 Bar
Part Number (With Vessels)	4233600949	4233600950	4233600951	4233600952	4233600953	4233600954	4233600955	4233600956
Part Number (Without Vessels)	4233601323	4233601324	4233601325	4233601326	4233601327	4233601328	4233601329	4233601330

* Actual Plant Flow is equal to Design Flow (DF)

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