

**Medical Air System**  
**mAIR Medical Air, cAIR Combined Air & sAIR Surgical Air Systems**  
**EN ISO 7396-1/HTM 02-01 and HTM2022 EurPh**  
**400V 50Hz, 4 Bar, 7 Bar, 8 Bar & 10 Bar Outlet**  
**Oil Injected Screw Compressors**

**SPECIFICATION**

**Air Plant System**

The Medical Air System is a modular base-mounted design consisting of oil-injected rotary screw 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), 700kPa (7 bar) or 1000 kPa (10 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/EN ISO 7396-1**

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 GA MED single-stage oil injected rotary screw compressors suitable for both continuous and frequent start/stop operation at a nominal outlet pressure of 750 kPa (7.5 bar), 1000 kPa (10 bar) or 1300 kPa (13 bar) gauge. Compressors shall be supplied with a block and fin style after cooler with a dedicated quiet running fan to maximise cooling and efficiency. A multistage oil separator capable of achieving 2ppm oil carry-over shall be fitted to minimise contamination and maintenance. Minimum EFF1 (CEMEP) rated, IP55 class F electric motors shall be used and incorporate maintenance-free bearings. Motors with lower efficiency ratings are not acceptable. The compressor shall be fitted with a high-definition colour display controller. 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 GA VSDs MED single-stage oil injected rotary screw 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 60% shall be achievable. The compressor shall operate from 400 - 1300kPa (4 - 10 or 13 bar) gauge.

The compressor shall be fitted with an oil-cooled Ferrite-Assisted Synchronous Reluctance motor according to the IE5 standard without rare earth materials and IP66 pressure-tight ingress protection. The motor bearings shall be oil-cooled and maintenance free. The motor shall be directly connected to the screw element without gearbox nor belt. The motor and screw element shall be fitted in a vertical position to limit the footprint of the compressor. The compressor shall be fitted with an inlet valve to avoid depressurization losses during stop (no unloading). A multistage oil separator capable of achieving 2ppm oil carry-over shall be fitted to minimise contamination and maintenance. The noise level of the compressor shall be maximum 63dB(A). The compressor shall be fitted with a touch-screen controller and electronic no-loss water drain with integrated manual drain for efficient removal of condensate without loss of compressed air. Compressors shall be supplied with a block and fin style cooler with a dedicated quiet running variable speed fan that meets ERP2020 to maximise cooling and efficiency.

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

The compressor shall have the following features as required by HTM:

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

## 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/m<sup>3</sup>, tested according to ISO 8573-5 & ISO 12500-2
- 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.

Contaminant	Threshold
H <sub>2</sub> O	67 ppm v/v
Dry particulates	Free from visible particulates in a 75 litre sample
Oil (droplet or mist)	0.1 mg/m <sup>3</sup>
CO	5 ppm v/v
CO <sub>2</sub>	500 ppm v/v
SO <sub>2</sub>	1 ppm v/v
NO	2 ppm v/v
NO <sub>2</sub>	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.

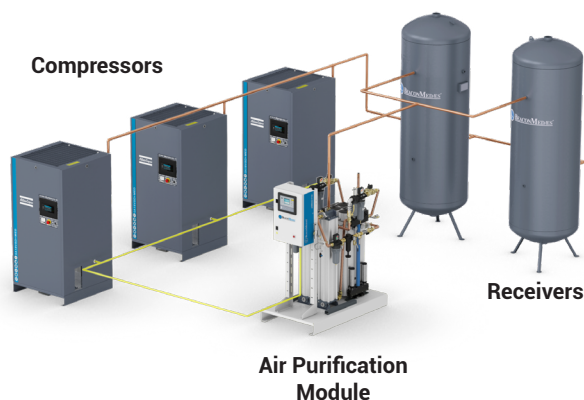
### Optional Items

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

- MOM standard receivers with 3rd party certification, hot dip galvanised steel inside and out
- VSD compressors (harmonics filter standard included for installation close to highly sensitive equipment)
- Synthetic oil for increased compressor life
- Tropical thermostatic sensors for countries with high humidity
- Phase sequence relays that prevent unintentional reverse operation of the compressors (standard for GA15-26 MED & GA7-37 VSD MED)
- 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<sub>2</sub> monitors including full integration into the ES-MED central controller giving alarm warnings when unacceptable CO and CO<sub>2</sub> levels are present



## Typical Layout



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.

## Condensate Management Options

If the oil in compressor condensate is not removed before it enters the sewage system, it can cause significant environmental damage. Therefore, condensate treatment is not only the responsible thing to do; in most countries it's the law. Thanks to its multi-stage filtration, Atlas Copco's OSC removes oil from your compressor's condensate with unmatched precision to achieve an oil content of 10 ppm at outlet. In addition, the OSC offers zero-hassle maintenance thanks to its easily removable filter bags and cartridges.

- Multiple filtration media
- Activated carbon for simple emulsions
- Organo Clay for stronger emulsions\*
- Easy to change filter media (when required)

Description	Type	Part number
Oil Water Separator, 900 l/min	Activated carbon	8102046581
	Organo clay	8102046607
Oil Water Separator, 1860 l/min	Activated carbon	8102046623
	Organo clay	8102046649
Oil Water Separator, 3780 l/min	Activated carbon	8102046664
	Organo clay	8102046730
Oil Water Separator, 6360 l/min	Activated carbon	8102046672
	Organo clay	8102046748
Oil Water Separator, 12780 l/min	Activated carbon	8102046680
	Organo clay	8102046755
Oil Water Separator, 22500 l/min	Activated carbon	8102046698
	Organo clay	8102046763

\*Stronger emulsions: RS Xtend, RS foodgrade, Oil mixtures



## Unique Selling Proposition

### GA MED Compressor

- 1 **Robust element and motor:** State-of-the-art screw element in combination with an IE3 efficiency motor, improved bearings and seal arrangement results into minimized energy costs.
- 2 **High tech oil vessel:** Extremely low oil carry-over thanks to vertical design of the oil vessel. Minimized oil vessel size further reduces air losses during unloading.
- 3 **Advanced monitoring:** High definition colour display with clear service and warning indications. Easy remote monitoring through a simple Ethernet connection thanks to the built-in webserver.
- 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.



### GA VSD MED Compressor

- 1 **Smart and Compact Compressor:** Innovative vertical arrangement minimize footprint, reducing valuable floor space required. The Smart Thermostatic Control Valve results in the optimal oil temperature to avoid condensation and maximize compression efficiency.
- 2 **State-of-the-Art Compressor Motor:** Ferrite-Assisted Synchronous Reluctance motor according to the IE5 standard without rare earth materials. Fully enclosed IP66 direct drive train. One oil circuit for motor, element, and bearings, eliminates the need for cooling air.
- 3 **Variable Speed Drive:** Each compressor contains a Neos Next variable frequency drive inverter which combines the functionality of an entire electrical cubicle in one unit.
- 4 **Fitted for Medical applications:** All HTM compressor requirements like amp meter, aftercooler temperature sensor, failed-to-go-on-load switch, etc. are factory-fitted. Furthermore, specific software safety features are added.



### dMED Purification Module

- 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. Filled 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.





## Combined Air Plant Sizing Guide

In HTM02-01, the relative size of receiver capacity and compressor capacity on surgical air or combined medical/surgical air systems changes according to the design flow rate. In order to correctly calculate the receiver capacity and compressor capacity, both the medical and surgical design flow-rates (DF's) are required. It should be noted that for all combined air systems, an additional duplex regulating station (ordered separately) is needed to supply the medical air pipeline.

Surgical Air Compressors	
Design Flow (L/min)	Value 'A' FAD (l)
<500	0.33 x DF
500-3500	0.66 x DF
>3500	0.5 x DF

Table 1: Surgical Air Plant Flow Rate Multiplier Value 'A'

### Example 1 - Small Day Treatment Centre (Upgrade)

#### Flow Rate and Dryer Sizing

Medical Air DF = 555 l/min (FAD) (4 Bar)  
Surgical Air DF = 1138 l/min (FAD) (7 Bar)  
Combined/total DF = 1693 l/min (FAD)  
(10 Bar high pressure system)

A dryer greater than 1693 l/min outlet flow should be selected (outlet flow is the inlet flow minus purge losses)  
= dMED045 inlet flow 2237 l/min, outlet flow 2008 l/min

#### Flow Rate and Compressor Sizing

From Table 1 surgical air DF is between 500-3500 l/min, so the multiplying factor 'A' = 0.66

$$\begin{aligned}\text{Compressor flow rate} &= \text{Med. DF} + (\text{Surg. DF} \times \text{A}) \\ &= 555 + (1138 \times 0.66) \\ &= 555 + 751 \\ &= 1306 \text{ l/min}\end{aligned}$$

We also need to add the purge losses to the compressor output. For additional purge consumption use:-

$$\begin{aligned}\text{dMED inlet} - \text{dMED outlet} &= \text{purge losses lpm} \\ &= 2237 - 2008 = 229 \text{ l/min}\end{aligned}$$

Compressors should be selected with a flow rate greater than  
1306 l/min + 229 l/min = 1535 l/min

#### Receiver Sizing

From Table 2 surgical air DF is between 500-2000 l/min, so the multiplying factor 'B' = 2 x 2/3

$$\begin{aligned}\text{Capacity} &= (\text{Med. DF} \times 0.5) + (\text{Surg. DF} \times \text{B}) \\ &= (555 \times 0.5) + (1138 \times 2 \times 2/3) \\ &= 278 + 1518 \\ &= 1796 \text{ litres}\end{aligned}$$

A combination of receivers with a minimum number of 2 should be selected

Selected receiver capacity = 2000 litres (2 x 1000 litre)

#### Plant System Selection

Selected plant description = cAIR-TGF10-1834

If no standard model is available for selection from the standard range a bespoke configuration of dryer, compressors and receivers are available and can be quoted by our sales and sales support teams.

Surgical Air Receivers	
Design Flow (L/min)	Value 'B' Receiver water capacity (l)
<500	1 x 200% x DF
500-2000	2 x 66.6% x DF
2001-3500	2 x 50% x DF
>3500	3 x 33.3% x DF

Table 2: Surgical Air Receiver Multiplier Value 'B'.

### Example 2 - Large District Hospital

#### Flow Rate and Dryer Sizing

Medical Air DF = 4920 l/min (FAD) (4 Bar)  
Surgical Air DF = 2888 l/min (FAD) (11 Bar)  
Combined/total DF = 7808 l/min (FAD) (10 Bar high pressure system)

A dryer greater than 7808 l/min should be selected (outlet flow is the inlet flow minus purge losses)  
= dMED220 inlet flow 10902 l/min, outlet flow 8940 l/min

#### Flow Rate and Compressor Sizing

From Table 1 surgical air DF is between 500-3500 l/min, so the multiplying factor 'A' = 0.66

$$\begin{aligned}\text{Plant flow rate} &= \text{Med. DF} + (\text{Surg. DF} \times \text{Value 'A'}) \\ &= 4920 + (2888 \times 0.66) \\ &= 4920 + 1907 \\ &= 6827 \text{ l/min}\end{aligned}$$

We also need to add the purge losses to the compressor output. For additional purge consumption use:-

$$\begin{aligned}\text{dMED inlet} - \text{dMED outlet} &= \text{purge losses lpm} \\ &= 10902 - 8940 = 1962 \text{ l/min}\end{aligned}$$

Compressors should be selected with a flow rate greater than  
6827 l/min + 1962 l/min = 8789 l/min

#### Receiver Sizing

From Table 2 surgical air DF is between 2001-3500 l/min, so the multiplying factor 'B' = 2 x 1/2

$$\begin{aligned}\text{Capacity} &= (\text{Med. DF} \times 0.5) + (\text{Surg. DF} \times \text{B}) \\ &= (4920 \times 0.5) + (2888 \times 2 \times 1/2) \\ &= 2460 + 2888 \\ &= 5348 \text{ litres}\end{aligned}$$

A combination of receivers with a minimum number of 2 should be selected

Selected receiver capacity = 6000 litres (3 x 2000 litre)

#### Plant System Selection

Selected plant description = n/a - special configuration required

If no standard model is available for selection from the standard range a bespoke configuration of dryer, compressors and receivers are available and can be quoted by our sales and sales support teams.

### Compressor Selection Table

#### Fixed Speed - GA MED Screw - 50Hz

Model Name	GA5 MED	GA7 MED	GA11 MED	GA15 MED	GA18 MED	GA22 MED	GA26 MED
Output flow (litres/minute) 7 bar, 10 bar and 13bar variants *	906 / 750 / 558	1308 / 1128 / 876	1830 / 1536 / 1302	2736 / 2268 / 1938	3384 / 2814 / 2364	3870 / 3246 / 2850	4362 / 3960 / 3360
Footprint L x W x H (mm)	965 x 655 x 1045	965 x 655 x 1045	965 x 655 x 1045	1280 x 780 x 1220	1280 x 780 x 1220	1280 x 780 x 1220	1280 x 780 x 1220
Compressor weight (kg)	223	238	253	455	464	480	490
Service connection (mm)	22	22	22	22	22	22	22
Noise level/pump (dB(A))	63	64	65	65	67	68	69
Max ambient temperature (°C)	46	46	46	46	46	46	46
Supply voltage (v)	400	400	400	400	400	400	400
Supply frequency (Hz)	50	50	50	50	50	50	50
Nominal motor rating (kW)	5	7	11	15	18	22	26
Full load current per compressor (A)	17	22	32	33.3	40.7	47.4	57
Approx. starting current (A)	42	61	88	110	138	180	211
Customer fuse rate** (A)	32	32	40	50	63	80	80
Cooling air flow per compressor (m³/s)	0.8	0.8	1	0.5	0.7	1.1	1.1
Part Number - 7.5 bar (CE)	8153 1371 90	8153 1371 94	8153 1371 98	8153 6162 82	8153 6163 16	8153 6163 40	8153 6163 73
Part Number - 7.5 bar (UKCA)	8153 1372 02	8153 1372 06	8153 1372 10				
Part Number - 10 bar (CE)	8153 1371 92	8153 1371 96	8153 1372 00	8153 6162 90	8153 6163 24	8153 6163 57	8153 6163 81
Part Number - 10 bar (UKCA)	8153 1372 04	8153 1372 08	8153 1372 12				
Part Number - 13 bar (CE)	8153 1371 93	8153 1371 97	8153 1372 01	8153 6163 08	8153 6163 32	8153 6163 65	8153 6163 99
Part Number - 13 bar (UKCA)	8153 1372 05	8153 1372 09	8153 1372 13				
Drawing Number	9828 0851 30	9828 0851 30	9828 0851 30	98280831 80	98280831 80	98280831 80	98280831 80

\* Output flow stated at reference conditions

#### Variable Speed Drive - GA VSD MED Screw - 50Hz

Model Name	GA7 VSDs MED	GA11 VSDs MED	GA15 VSDs MED	GA18 VSDs MED	GA22 VSDs MED	GA26 VSDs MED	GA30 VSDs MED	GA37 VSDs MED
Part Number - HTM	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request
Part Number - ISO	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request

\* Output flow stated at reference conditions

## Receiver Selection Table

### Steel, Powder Coated (Standard)

Receiver Capacity (litres)	270	500	1000	1500	2000	3000
Maximum working pressure (bar)	11	11	11	11	11	11
Individual Receiver Dimensions (diameter, height, mm)	500/1860	600/2058	790/2352	1000/2335	1000/2835	1200/3015
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

Receiver Capacity (litres)	270	500	1000	1500	2000	3000
Maximum working pressure (bar)	16	16	16	16	16	16
Individual Receiver Dimensions (diameter, height, mm)	500/1860	600/2058	790/2352	1000/2335	1000/2835	1200/3015
Receiver Weight (kg)	60	150	210	278	352	537
Receiver pipe size (mm)	28	28	42	42	42	42
Receiver Part Number	4233400923	4233400925	4233400927	4233400929	4233400931	4233400933
Receiver Accessory Kit	8102340591	8102340595	8102340597	8102340599	8102340601	8102340603

### Galvanised steel

Receiver Capacity (litres)	270	500	1000	1500	2000	3000
Maximum working pressure (bar)	16	16	16	16	16	16
Individual Receiver Dimensions (diameter, height, mm)	500/1860	600/2058	790/2352	1000/2335	1000/2835	1200/3015
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

\* Accessory kit for medical air receiver complete with plant data plate, test certificate, pressure safety valve, zero-loss electronic drain valve (with isolation and bypass valve), pressure gauge (with isolation valve), fusible plug, copper inlet and outlet union connection pipes (each with isolation valve).

## 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
Inlet flow (l/m) at 13 Bar ***	1246	1727	2237	3710	4474	5465	7447	10902	14866
Output flow (l/m) at 4 bar	1119	1549	2008	3328	4015	4904	6682	9781	13337
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 above part numbers plus the option 0000 0224 18 (Factory set 10 to 4 bar dryer)

\*\*\* For 13 to 4 bar order the above part numbers plus the option 0000 0224 19 (Factory set 13 to 4 bar dryer)

### Dryer Performance Data - 7 & 8 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
Inlet flow (l/m) at 13 Bar **	1246	1727	2237	3710	4474	5465	7447	10902	14866
Output flow (l/m) at 8 bar	1119	1549	2008	3328	4015	4904	6682	9781	13337
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.

\*\* For 13 to 8 bar order the above part numbers plus the option 0000 0224 38 (Factory set 13 to 8 bar dryer)

### Dryer Performance Data - 10 bar System

Model Name	dMED 025	dMED 035	dMED 046	dMED 075	dMED 090	dMED 110	dMED 150	dMED 220	dMED 300
Inlet flow at 13 bar (litres/minute)	1246	1727	2237	3710	4474	5465	7447	10902	14866
Output flow (litres/minute) at 10 bar line pressure *	1119	1549	2008	3328	4015	4904	6682	9781	13337
Part Number - dryer at 10 bar outlet + QDT	8102 3709 65	8102 3709 68	8102 3709 71	8102 3709 77	8102 3709 80	8102 3709 83	8102 3709 86	8102 3709 92	8102 3709 95
Part Number - dryer at 10 bar outlet + QDT hopcalite filter for EurPh	8102 3711 95	8102 3711 98	8102 3712 01	8102 3712 07	8102 3712 10	8102 3712 13	8102 3712 16	8102 3712 22	8102 3712 25



### 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 <sup>2</sup> /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 <sup>2</sup> /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  $\pm 5\%$ .
- 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 <sub>2</sub> sensor for dMED Air Purifier	0000 0224 28
CO <sub>2</sub> & 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
Factory set 13 to 4 bar dryer	0000 0224 19
Factory set 13 to 8 bar dryer	0000 0224 38

**Air Plant Selection Table**
**HTM 02-01 Medical Air 4 bar – 50 Hz**
**GA MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)**

Model Name	mAIR-TGF	mAIR-TGF	mAIR-TGF	mAIR-TGF	mAIR-TGF	mAIR-TGF	mAIR-TGF	mAIR-QGF	mAIR-QGF	mAIR-QGF	mAIR-QGF
Model Description	mAIR-TGF4-722 HTM02-01 50Hz	mAIR-TGF4-1000 HTM02-01 50Hz	mAIR-TGF4-1460 HTM02-01 50Hz	mAIR-TGF4-2175 HTM02-01 50Hz	mAIR-TGF4-2619 HTM02-01 50Hz	mAIR-TGF4-3105 HTM02-01 50Hz	mAIR-TGF4-3483 HTM02-01 50Hz	mAIR-QGF4-4351 HTM02-01 50Hz	mAIR-QGF4-5109 HTM02-01 50Hz	mAIR-QGF4-6211 HTM02-01 50Hz	mAIR-QGF4-6966 HTM02-01 50Hz
Design Flow (L/min) *	722	1000	1460	2175	2619	3105	3483	4351	5109	6211	6966
Number of compressors	3	3	3	3	3	3	3	4	4	4	4
Type of compressor	GA5 MED 7.5 bar	GA7 MED 7.5 bar	GA11 MED 7.5 bar	GA15 MED 7.5 bar	GA18 MED 7.5 bar	GA22 MED 7.5 bar	GA26 MED 7.5 bar	GA15 MED 7.5 bar	GA18 MED 7.5 bar	GA22 MED 7.5 bar	GA26 MED 7.5 bar
Type of dryer	dMED 035 7.5-4	dMED 046 7.5-4	dMED 075 7.5-4	dMED 110 7.5-4	dMED 150 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	dMED 300 7.5-4
Number of receivers	2	2	2	2	2	2	2	2	2	2	2
Receiver volume (l) each	270 11bar	270 11bar	500 11bar	1000 11 bar	1000 11 bar	1000 11 bar	1000 11 bar	1500 11 bar	1500 bar	2000 11 bar	2000 11 bar
Part Number (With Vessels)	4233600592	4233600593	4233600594	4233600595	4233600596	4233600597	4233600598	4233600599	4233600600	4233600601	4233600602
Part Number (No Vessels)	4233600966	4233600967	4233600968	4233600969	4233600970	4233600971	4233600972	4233600973	4233600974	4233600975	4233600976

\* Actual plant flow is equal to Design Flow (DF)

**HTM 02-01 Combined Air 7 bar – 50 Hz**
**GA MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)**

Model Name	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-QGF	cAIR-QGF	cAIR-QGF	cAIR-QGF	cAIR-PGF
Model Description	cAIR-TGF7-836- HTM 02-01 50Hz	cAIR-TGF7-1028- HTM 02-01 50Hz	cAIR-TGF7-1527- HTM 02-01 50Hz	cAIR-TGF7-2272- HTM 02-01 50Hz	cAIR-TGF7-2838- HTM 02-01 50Hz	cAIR-TGF7-3234- HTM 02-01 50Hz	cAIR-QGF7-4544- HTM 02-01 50Hz	cAIR-QGF7-5430- HTM 02-01 50Hz	cAIR-QGF7-6472- HTM 02-01 50Hz	cAIR-QGF7-7402- HTM 02-01 50Hz	cAIR-PGF7-10109- HTM 02-01 50Hz
Design flow (L/min) *	836	1028	1527	2272	2838	3234	4544	5430	6472	7402	10109
Actual Plant Flow (L/min)	575	854	1331	1886	2355	2685	3771	4507	5371	6799	8209
Number of Compressors	3	3	3	3	3	3	4	4	4	4	5
Type of compressor	GA5 MED 10 bar	GA7 MED 10 bar	GA11 MED 10 bar	GA15 MED 10 bar	GA18 MED 10 bar	GA22 MED 10 bar	GA15 MED 10 bar	GA18 MED 10 bar	GA22 MED 10 bar	GA26 MED 10 bar	GA22 MED 10 bar
Type of dryer	dMED 025 10-7	dMED 025 10-7	dMED 046 10-7	dMED 075 10-7	dMED 090 10-7	dMED 110 10-7	dMED 150 10-7	dMED 220 10-7	dMED 220 10-7	dMED 220 10-7	dMED 300 10-7
Number of receivers	2	2	2	2	2	2	3	3	3	3	3
Receiver volume (l) each	1000 11 Bar	1000 11 Bar	1000 11 Bar	1500 11 Bar	1500 11 Bar	1500 11 Bar	1500 11 Bar	1500 11 Bar	2000 11 Bar	2000 11 Bar	3000 11 Bar
Part Number (With Vessels)	4233600603	4233600604	4233600605	4233600606	4233600607	4233600608	4233600609	4233600610	4233600611	4233600612	4233600613
Part Number (No Vessels)	4233600977	4233600978	4233600979	4233600980	4233600981	4233600982	4233600983	4233600984	4233600985	4233600986	4233600987

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

**HTM 02-01 Combined Air 8 bar – 50 Hz**
**GA MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)**

Model Name	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-QGF
Model Description	cAIR-TGF8-566- HTM 02-01 50Hz	cAIR-TGF8-874- HTM 02-01 50Hz	cAIR-TGF8-1376- HTM 02-01 50Hz	cAIR-TGF8-2008- HTM 02-01 50Hz	cAIR-TGF8-2388- HTM 02-01 50Hz	cAIR-TGF8-2974- HTM 02-01 50Hz	cAIR-TGF8-3328- HTM 02-01 50Hz	cAIR-QGF8-4015- HTM 02-01 50Hz
Design flow (L/min) *	566	874	1376	2008	2388	2974	3328	4015
Actual Plant Flow (L/min)	377	725	1142	1709	1982	2468	2978	3417
Number of Compressors	3	3	3	3	3	3	3	4
Type of compressor	GA5 MED 13 bar	GA7 MED 13 bar	GA11 MED 13 bar	GA15 MED 13 bar	GA18 MED 13 bar	GA22 MED 13 bar	GA26 MED 13 bar	GA15 MED 13 bar
Type of dryer	dMED 025 13-8	dMED 025 13-8	dMED 035 13-8	dMED 046 13-8	dMED 075 13-8	dMED 075 13-8	dMED 075 13-8	dMED 090 13-8
Number of receivers	2	2	2	2	2	2	2	2
Receiver volume (l) each	500 14 Bar	1000 14 Bar	1000 14 Bar	1000 14 Bar	1500 14 Bar	1500 14 Bar	2000 14 Bar	2000 14 Bar
Part Number (With Vessels)	4233600614	4233600615	4233600616	4233600617	4233600618	4233600619	4233600620	4233600621
Part Number (No Vessels)	4233600988	4233600989	4233600990	4233600991	4233600992	4233600993	4233600994	4233600995

Model Name	cAIR-QGF	cAIR-QGF	cAIR-QGF	cAIR-PGF	cAIR-HGF
Model Description	cAIR-QGF8-4904- HTM 02-01 50Hz	cAIR-QGF8-5946- HTM 02-01 50Hz	cAIR-QGF8-6000- HTM 02-01 50Hz	cAIR-PGF8-9781- HTM 02-01 50Hz	cAIR-HGF8-12000- HTM 02-01 50Hz
Design flow (L/min) *	4904	5946	6000	9781	12000
Actual Plant Flow (L/min)	4167	4935	5955	7429	9871
Number of Compressors	4	4	4	5	6
Type of compressor	GA18 MED 13 bar	GA22 MED 13 bar	GA26 MED 13 bar	GA22 MED 13 bar	GA22 MED 13 bar
Type of dryer	dMED 110 13-8	dMED 150 13-8	dMED 150 13-8	dMED 220 13-8	dMED 300 13-8
Number of receivers	3	3	3	3	3
Receiver volume (l) each	1500 14 Bar	1500 14 Bar	1500 14 Bar	3000 14 Bar	3000 14 Bar
Part Number (With Vessels)	4233600622	4233600623	4233600624	4233600625	4233600626
Part Number (No Vessels)	4233600996	4233600997	4233600998	4233600999	4233601000

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

**HTM 02-01 Combined Air 10 bar - 50Hz**
**GA MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)**

Model Name	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-TGF	cAIR-QGF	cAIR-QGF
Model Description	cAIR-TGFT10-566- HTM 02-01 50Hz	cAIR-TGFT10-874- HTM 02-01 50Hz	cAIR-TGFT10-1376- HTM 02-01 50Hz	cAIR-TGFT10-2008- HTM 02-01 50Hz	cAIR-TGFT10-2388- HTM 02-01 50Hz	cAIR-TGFT10-2974- HTM 02-01 50Hz	cAIR-TGFT10-3328- HTM 02-01 50Hz	cAIR-QGFT10-4015- HTM 02-01 50Hz	cAIR-QGFT10-4904- HTM 02-01 50Hz
Design Flow (L/min) *	566	874	1376	2008	2388	2974	3328	4015	4904
Actual Plant Flow (L/min)	377	725	1142	1709	1982	2468	2978	3417	4167
Number of Compressors	3	3	3	3	3	3	3	4	4
Type of Compressor	GA5 MED 13 Bar	GA7 MED 13 Bar	GA11 MED 13 Bar	GA15 MED 13 Bar	GA18 MED 13 Bar	GA 22 MED 13 Bar	GA 26 MED 13 Bar	GA15 MED 13 Bar	GA18 MED 13 Bar
Type of dryer	dMED 025 13-10	dMED 025 13-10	dMED 035 13-10	dMED 046 13-10	dMED 075 13-10	dMED 075 13-10	dMED 075 13-10	dMED 090 13-10	dMED 110 13-10
Number of receivers	2	2	2	2	2	2	2	2	3
Receiver volume (l) each	500 14 Bar	1000 14 Bar	1000 14 Bar	1000 14 Bar	1500 14 Bar	1500 14 Bar	2000 14 Bar	2000 14 Bar	1500 14 Bar
Part Number (With Vessels)	4233600627	4233600628	4233600629	4233600630	4233600631	4233600632	4233600633	4233600634	4233600635
Part Number (No Vessels)	4233601001	4233601002	4233601003	4233601004	4233601005	4233601006	4233601007	4233601008	4233601009

Model Name	cAIR-QGF	cAIR-QGF	cAIR-PGF	cAIR-HGF
Model Description	cAIR-QGFT10-5946- HTM 02-01 50Hz	cAIR-QGFT10-6000- HTM 02-01 50Hz	cAIR-PGFT10-9781- HTM 02-01 50Hz	cAIR-HGFT10-12000- HTM 02-01 50Hz
Design Flow (L/min) *	5946	6000	9781	12000
Actual Plant Flow (L/min)	4935	5955	7429	9871
Number of Compressors	4	4	5	6
Type of Compressor	GA22 MED 13 Bar	GA26 MED 13 Bar	GA22 MED 13 Bar	GA22 MED 13 Bar
Type of dryer	dMED 150 13-10	dMED 150 13-10	dMED 220 13-10	dMED 300 13-10
Number of receivers	3	3	3	3
Receiver volume (l) each	1500 14 Bar	1500 14 Bar	3000 14 Bar	3000 14 Bar
Part Number (With Vessels)	4233600636	4233600637	4233600638	4233600639
Part Number (No Vessels)	4233601010	4233601011	4233601012	4233601013

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





**HTM 02-01 Medical Air 4 bar - 50Hz**
**GA MED Variable Speed Screw Compressors at 7.5 bar, dMED dryer (QDT+ with additional Hopcalite filter)**

Model Name	mAIR-TGV	mAIR-TGV	mAIR-TGV	mAIR-TGV	mAIR-TGV	mAIR-TGV	mAIR-TGV	mAIR-TGV	mAIR-QGV
Model Description	mAIR-TGV4-813 HTM02-01 50Hz	mAIR-TGV4-1000 HTM02-01 50Hz	mAIR-TGV4-1568 HTM02-01 50Hz	mAIR-TGV4-1947 HTM02-01 50Hz	mAIR-TGV4-2985 HTM02-01 50Hz	mAIR-TGV4-3483 HTM02-01 50Hz	mAIR-TGV4-4000 HTM02-01 50Hz	mAIR-TGV4-5109 HTM02-01 50Hz	mAIR-QGV4-6966- HTM 02-01 50Hz
Design Flow (L/min) *	813	1000	1568	1947	2985	3483	4000	5109	6966
Number of Compressors	3	3	3	3	3	3	3	3	4
Type of Compressor	GA7 MED VSDs	GA7 MED VSDs	GA11 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA22 MED VSDs	GA26 MED VSDs	GA37 MED VSDs	GA22 MED VSDs
Type of dryer	dMED 035 7.5-4	dMED 046 7.5-4	dMED 075 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	2	2
Receiver volume (l) each	270 11 Bar	270 11 Bar	500 11 Bar	500 11 Bar	1000 11 Bar	1000 11 Bar	1000 11 Bar	1500 11 Bar	2000 11 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request

\* Actual plant flow is equal to Design Flow (DF)

**HTM 02-01 Combined Air 7 bar - 50Hz**
**GA MED Variable Speed Screw Compressors at 10 bar, dMED dryer (QDT+ with additional Hopcalite filter)**

Model Name	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-QGV	cAIR-QGV	cAIR-PGV
Model Description	cAIR-TGV7-1086- HTM 02-01 50Hz	cAIR-TGV7-2106- HTM 02-01 50Hz	cAIR-TGV7-3198- HTM 02-01 50Hz	cAIR-TGV7-4746- HTM 02-01 50Hz	cAIR-QGV7-6398- HTM 02-01 50Hz	cAIR-QGV7-8394- HTM 02-01 50Hz	cAIR-PGV7-10109- HTM 02-01 50Hz
Design Flow (L/min) *	1086	2106	3198	4746	6398	8394	10109
Actual Plant Flow (L/min)	902	1748	2655	3939	5311	6295	8119
Number of compressors	3	3	3	3	4	4	5
Type of Compressor	GA7 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA26 MED VSDs	GA18 MED VSDs	GA22 MED VSDs	GA18 MED VSDs
Type of dryer	dMED 035 10-7	dMED 075 10-7	dMED 110 10-7	dMED 150 10-7	dMED 220 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	1000 11 Bar	1500 11 Bar	2000 11 Bar	2000 11 Bar	3000 11 Bar	3000 11 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request

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

**HTM 02-01 Combined Air 8 bar - 50Hz**
**GA MED Variable Speed Screw Compressors at 13 bar, dMED dryer (QDT+ with additional Hopcalite filter)**

Model Name	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV
Model Description	cAIR-TGV8-874- HTM 02-01 50Hz	cAIR-TGV8-1484- HTM 02-01 50Hz	cAIR-TGV8-1740- HTM 02-01 50Hz	cAIR-TGV8-2684- HTM 02-01 50Hz	cAIR-TGV8-3328- HTM 02-01 50Hz
Design Flow (L/min) *	874	1484	1740	2684	3328
Actual Plant Flow (L/min)	725	1232	1445	2228	2864
Number of compressors	3	3	3	3	3
Type of Compressor	GA7 MED VSDs	GA11 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA22 MED VSDs
Type of dryer	dMED 025 13-8	dMED 035 13-8	dMED 046 13-8	dMED 075 13-8	dMED 075 13-8
Number of receivers	2	2	2	2	2
Receiver volume (l) each	1000 14 Bar	1000 14 Bar	1000 14 Bar	1500 14 Bar	2000 14 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request

Model Name	cAIR-TGV	cAIR-TGV	cAIR-QGV	cAIR-PGV	cAIR-PGV
Model Description	cAIR-TGV8-4015- HTM 02-01 50Hz	cAIR-TGV8-4904- HTM 02-01 50Hz	cAIR-QGV8-6000- HTM 02-01 50Hz	cAIR-PGV8-8946- HTM 02-01 50Hz	cAIR-PGV8-12000- HTM 02-01 50Hz
Design Flow (L/min) *	4015	4904	6000	8946	12000
Actual Plant Flow (L/min)	3411	4641	5727	6709	10081
Number of compressors	3	3	4	5	5
Type of Compressor	GA26 MED VSDs	GA37 MED VSDs	GA22 MED VSDs	GA18 MED VSDs	GA26 MED VSDs
Type of dryer	dMED 090 13-8	dMED 110 13-8	dMED 150 13-8	dMED 220 13-8	dMED 300 13-8
Number of receivers	2	3	3	3	3
Receiver volume (l) each	2000 14 Bar	1500 14 Bar	1500 14 Bar	3000 14 Bar	3000 14 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request

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

**HTM 02-01 Combined Air 10 bar - 50Hz**
**GA MED Variable Speed Screw Compressors at 13 bar, dMED dryer (QDT+ with additional Hopcalite filter)**

Model Name	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-TGV	cAIR-QGV	cAIR-PGV	cAIR-PGV
Model Description	cAIR-TGV10-874- HTM 02-01 50Hz	cAIR-TGV10-1484- HTM 02-01 50Hz	cAIR-TGV10-1740- HTM 02-01 50Hz	cAIR-TGV10-2684- HTM 02-01 50Hz	cAIR-TGV10-3328- HTM 02-01 50Hz	cAIR-TGV10-4015- HTM 02-01 50Hz	cAIR-TGV10-4904- HTM 02-01 50Hz	cAIR-QGV10-6000- HTM 02-01 50Hz	cAIR-PGV10-8946- HTM 02-01 50Hz	cAIR-PGV10-12000- HTM 02-01 50Hz
Design Flow (L/min) *	874	1484	1740	2684	3328	4015	4904	6000	8946	12000
Actual Plant Flow (L/min)	725	1232	1445	2228	2864	3411	4641	5727	6709	10081
Number of Compressors	3	3	3	3	3	3	3	4	5	5
Type of Compressor	GA7 MED VSDs	GA11 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA22 MED VSDs	GA26 MED VSDs	GA37 MED VSDs	GA22 MED VSDs	GA18 MED VSDs	GA26 MED VSDs
Type of dryer	dMED 025 13-10	dMED 035 13-10	dMED 046 13-10	dMED 075 13-10	dMED 075 13-10	dMED 090 13-10	dMED 110 13-10	dMED 150 13-10	dMED 220 13-10	dMED 300 13-10
Number of receivers	2	2	2	2	2	2	3	3	3	3
Receiver volume (l) each	1000 14 Bar	1000 14 Bar	1000 14 Bar	1500 14 Bar	2000 14 Bar	2000 14 Bar	1500 14 Bar	1500 14 Bar	3000 14 Bar	3000 14 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	4233 6006 75	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	4233 6010 49	On Request

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

**HTM 2022 Medical Air 4 bar - 50Hz**
**GA MED Fixed Speed Screw Compressors, dMED dryer (Standard QDT)**

Model Name	mAIR-DGF	mAIR-DGF	mAIR-DGF	mAIR-DGF	mAIR-DGF	mAIR-DGF	mAIR-DGF	mAIR-TGF	mAIR-TGF	mAIR-TGF	mAIR-TGF
Model Description	mAIR-DGF4-722- HTM 2022 50Hz	mAIR-DGF4-1000- HTM 2022 50Hz	mAIR-DGF4-1460- HTM 2022 50Hz	mAIR-DGF4-2175- HTM 2022 50Hz	mAIR-DGF4-2619- HTM 2022 50Hz	mAIR-DGF4-3105- HTM 2022 50Hz	mAIR-DGF4-3483- HTM 2022 50Hz	mAIR-TGF4-4351- HTM 2022 50Hz	mAIR-TGF4-5109- HTM 2022 50Hz	mAIR-TGF4-6211- HTM 2022 50Hz	mAIR-TGF4-6966- HTM 2022 50Hz
Design Flow (L/min) *	722	1000	1460	2175	2619	3105	3483	4351	5109	6211	6966
Number of Compressors	2	2	2	2	2	2	2	3	3	3	3
Type of Compressor	GA5 MED 7.5 Bar	GA7 MED 7.5 Bar	GA11 MED 7.5 Bar	GA15 MED 7.5 Bar	GA18 MED 7.5 Bar	GA22 MED 7.5 bar	GA26 MED 7.5 Bar	GA15 MED 7.5 Bar	GA18 MED 7.5 Bar	GA22 MED 7.5 bar	GA26 MED 7.5 Bar
Type of dryer	dMED 035 7.5-4	dMED 046 7.5-4	dMED 075 7.5-4	dMED 110 7.5-4	dMED 150 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	dMED 300 7.5-4
Number of receivers	1	1	1	1	1	1	1	1	1	2	2
Receiver volume (l) each	500 11 Bar	500 11 Bar	1000 11 Bar	1500 11 Bar	1500 11 Bar	2000 11 Bar	2000 11 Bar	3000 11 Bar	3000 11 Bar	2000 11 Bar	2000 11 Bar
Part Number (With Vessels)	4233 6007 62	4233 6007 63	4233 6007 64	4233 6007 65	4233 6007 66	4233 6007 67	4233 6007 68	4233 6007 69	4233 6007 70	4233 6007 71	4233 6007 72
Part Number (No Vessels)	4233 6011 36	4233 6011 37	4233 6011 38	4233 6011 39	4233 6011 40	4233 6011 41	4233 6011 42	4233 6011 43	4233 6011 44	4233 6011 45	4233 6011 46

\* Actual plant flow is equal to Design Flow (DF)

**HTM 2022 Combined Air 7 bar - 50Hz**
**GA MED Compressors, dMED dryer (Standard QDT)**

Model Name	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-TGF	cAIR-TGF	cAIR-QGF
Model Description	cAIR-DGF7-575- HTM 2022 50Hz	cAIR-DGF7-854- HTM 2022 50Hz	cAIR-DGF7-1331- HTM 2022 50Hz	cAIR-DGF7-1886- HTM 2022 50Hz	cAIR-DGF7-2432- HTM 2022 50Hz	cAIR-DGF7-2787- HTM 2022 50Hz	cAIR-DGF7-3000- HTM 2022 50Hz	cAIR-TGF7-4863- HTM 2022 50Hz	cAIR-TGF7-6799- HTM 2022 50Hz	cAIR-QGF7- 10109-HTM 2022 50Hz
Design Flow (L/min) *	575	854	1331	1886	2432	2787	3000	4863	6799	10109
Number of Compressors	2	2	2	2	2	2	2	3	3	4
Type of Compressor	GA5 MED 10 Bar	GA7 MED 10 Bar	GA11 MED 10 Bar	GA15 MED 10 Bar	GA18 MED 10 Bar	GA22 MED 10 Bar	GA26 MED 10 Bar	GA18 MED 10 Bar	GA26 MED 10 Bar	GA26 MED 10 Bar
Type of dryer	dMED 025 10-7	dMED 035 10-7	dMED 046 10-7	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	1	1	1	1	1	1	1	1	2	2
Receiver volume (l) each	500 11 Bar	500 11 Bar	1000 11 Bar	1000 11 Bar	1500 11 Bar	1500 11 Bar	1500 11 Bar	3000 11 Bar	2000 11 Bar	3000 11 Bar
Part Number (With Vessels)	4233 6007 73	4233 6007 74	4233 6007 75	4233 6007 76	4233 6007 77	4233 6007 78	4233 6007 79	4233 6007 80	4233 6007 81	4233 6007 82
Part Number (No Vessels)	4233 6011 47	4233 6011 48	4233 6011 49	4233 6011 50	4233 6011 51	4233 6011 52	4233 6011 53	4233 6011 54	4233 6011 55	4233 6011 56

\* Actual plant flow is equal to Design Flow (DF)

**HTM 2022 Medical Air 10 bar - 50Hz**
**GA MED Compressors, dMED dryer (Standard QDT)**

Model Name	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-DGF	cAIR-TGF	cAIR-TGF	cAIR-QGF	cAIR-HGF
Model Description	cAIR-DGF10-725- HTM 2022 50Hz	cAIR-DGF10-1000- HTM 2022 50Hz	cAIR-DGF10-1709- HTM 2022 50Hz	cAIR-DGF10-2000- HTM 2022 50Hz	cAIR-DGF10-2901- HTM 2022 50Hz	cAIR-TGF10-4000- HTM 2022 50Hz	cAIR-TGF10-5955- HTM 2022 50Hz	cAIR-QGF10-8000- HTM 2022 50Hz	cAIR-HGF10-12000- HTM 2022 50Hz
Design Flow (L/min) *	725	1000	1709	2000	2901	4000	5955	8000	12000
Number of Compressors	2	2	2	2	2	3	3	4	6
Type of Compressor	GA7 MED 13 Bar	GA11 MED 13 Bar	GA15 MED 13 Bar	GA22 MED 13 Bar	GA26 MED 13 Bar	GA18 MED 13 Bar	GA26 MED 13 Bar	GA26 MED 13 Bar	GA22 MED 13 Bar
Type of dryer	dMED 025 13-10	dMED 035 13-10	dMED 046 13-10	dMED 075 13-10	dMED 090 13-10	dMED 110 13-10	dMED 150 13-10	dMED 220 13-10	dMED 300 13-10
Number of receivers	1	1	1	1	1	1	1	2	2
Receiver volume (l) each	500 14 Bar	500 14 Bar	1000 14 Bar	1000 14 Bar	1500 14 Bar	2000 14 Bar	3000 14 Bar	2000 14 Bar	3000 14 Bar
Part Number (With Vessels)	4233 6007 83	4233 6007 84	4233 6007 85	4233 6007 86	4233 6007 87	4233 6007 88	4233 6007 89	4233 6007 90	4233 6007 91
Part Number (No Vessels)	4233 6011 57	4233 6011 58	4233 6011 59	4233 6011 60	4233 6011 61	4233 6011 62	4233 6011 63	4233 6011 64	4233 6011 65

\* Actual plant flow is equal to Design Flow (DF)

**HTM 2022 Medical Air 4 bar - 50Hz**
**GA MED Variable Speed Screw Compressors at 7 bar, dMED dryer (QDT+ with additional Hopcalite filter)**

Model Name	mAIR-DGV	mAIR-DGV	mAIR-DGV	mAIR-DGV	mAIR-DGV	mAIR-DGV	mAIR-DGV	mAIR-DGV	mAIR-TGV
Model Description	mAIR-DGV4-813 HTM2022 50Hz	mAIR-DGV4-1000 HTM2022 50Hz	mAIR-DGV4-1568 HTM2022 50Hz	mAIR-DGV4-1947 HTM2022 50Hz	mAIR-DGV4-2985 HTM2022 50Hz	mAIR-DGV4-3483 HTM2022 50Hz	mAIR-DGV4-4000 HTM2022 50Hz	mAIR-DGV4-5109 HTM2022 50Hz	mAIR-TGV4-6966 HTM2022 50Hz
Design Flow (L/min) *	813	1000	1568	1947	2985	3483	4000	5109	6966
Number of Compressors	2	2	2	2	2	2	2	2	3
Type of Compressor	GA7 MED VSDs	GA7 MED VSDs	GA11 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA22 MED VSDs	GA30 MED VSDs	GA37 MED VSDs	GA22 MED VSDs
Type of dryer	dMED 035 7.5-4	dMED 046 7.5-4	dMED 075 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	1	1	2
Receiver volume (l) each	500 11 Bar	500 11 Bar	1000 11 Bar	1000 11 Bar	1500 11 Bar	2000 11 Bar	2000 11 Bar	3000 11 Bar	2000 11 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request

\* Actual plant flow is equal to Design Flow (DF)



### HTM 2022 Combined Air 7 bar - 50Hz

#### GA MED VSD Variable Speed Screw Compressors at 10 bar, dMED dryer (QDT+ with additional Hopcalite filter)

Model Name	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-TGV	cAIR-QGV
Model Description	cAIR-DGV7-902- HTM 2022 50Hz	cAIR-DGV7-1403- HTM 2022 50Hz	cAIR-DGV7-1748- HTM 2022 50Hz	cAIR-DGV7-2757- HTM 2022 50Hz	cAIR-DGV7-3351- HTM 2022 50Hz	cAIR-DGV7-4000- HTM 2022 50Hz	cAIR-DGV7-5068- HTM 2022 50Hz	cAIR-TGV7-6703- HTM 2022 50Hz	cAIR-QGV7-10109- HTM 2022 50Hz
Design Flow (L/min) *	902	1403	1748	2757	3351	4000	5068	6703	10109
Number of Compressors	2	2	2	2	2	2	2	3	4
Type of Compressor	GA7 MED VSDs	GA11 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA22 MED VSDs	GA30 MED VSDs	GA37 MED VSDs	GA22 MED VSDs	GA22 MED VSDs
Type of dryer	dMED 035 10-7	dMED 046 10-7	dMED 075 10-7	dMED 090 10-7	dMED 110 10-7	dMED 150 10-7	dMED 150 10-7	dMED 220 10-7	dMED 300 10-7
Number of receivers	1	1	1	1	1	1	1	2	2
Receiver volume (l) each	500 11 Bar	1000 11 Bar	1000 11 Bar	1500 11 Bar	2000 11 Bar	2000 11 Bar	3000 11 Bar	2000 11 Bar	3000 11 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request

\* Actual plant flow is equal to Design Flow (DF)

### HTM 2022 Combined Air 10 bar - 50Hz

#### GA MED VSD Variable Speed Screw Compressors at 13 bar, dMED dryer (QDT+ with additional Hopcalite filter)

Model Name	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-DGV	cAIR-TGV	cAIR-QGV	cAIR-PGV
Model Description	cAIR-DGV10-725- HTM 2022 50Hz	cAIR-DGV10-1000- HTM 2022 50Hz	cAIR-DGV10-1496- HTM 2022 50Hz	cAIR-DGV10-2000- HTM 2022 50Hz	cAIR-DGV10-2864- HTM 2022 50Hz	cAIR-DGV10-3000- HTM 2022 50Hz	cAIR-DGV10-4000- HTM 2022 50Hz	cAIR-TGV10-5727- HTM 2022 50Hz	cAIR-QGV10-8000- HTM 2022 50Hz	cAIR-PGV10-12000- HTM 2022 50Hz
Design Flow (L/min) *	725	1000	1496	2000	2864	3000	4000	5727	8000	12000
Number of Compressors	2	2	2	2	2	2	2	3	4	5
Type of Compressor	GA7 MED VSDs	GA11 MED VSDs	GA15 MED VSDs	GA18 MED VSDs	GA22 MED VSDs	GA26 MED VSDs	GA37 MED VSDs	GA22 MED VSDs	GA22 MED VSDs	GA26 MED VSDs
Type of dryer	dMED 025 13-10	dMED 035 13-10	dMED 035 13-10	dMED 046 13-10	dMED 075 13-10	dMED 090 13-10	dMED 110 13-10	dMED 150 13-10	dMED 220 13-10	dMED 300 13-10
Number of receivers	1	1	1	1	1	1	1	1	2	2
Receiver volume (l) each	500 14 Bar	500 14 Bar	1000 14 Bar	1000 14 Bar	1500 14 Bar	1500 14 Bar	2000 14 Bar	3000 14 Bar	2000 14 Bar	3000 14 Bar
Part Number (With Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request
Part Number (No Vessels)	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request	On Request

\* Actual plant flow is equal to Design Flow (DF)