

mAIR Medical Air, cAIR Combined Air & sAIR Surgical Air Systems
EN ISO 7396-1/HTM 02-01 and HTM2022 EurPh
380V 60Hz, 4 Bar & 7 Bar Outlet
Oil-free Scroll Compressors
SPECIFICATION

Air Plant System

The Medical Air System is a modular base-mounted design consisting of oil free scroll compressor modules, 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

Compressors shall be Atlas Copco SF MED single-stage oil free scroll compressors suitable for both continuous and frequent start/stop operation at a nominal outlet pressure of 800 kPa (8 bar) or 1000 kPa (10 bar) gauge. Each compressor shall have at least two individual scroll elements. The air quality shall be 100% oil free, certified ISO8573-1 Class 0 by an independent agency. The compressor shall have a sound insulating enclosure. Compressors shall be supplied with an aftercooler with a dedicated quiet running fan to maximise cooling and efficiency. Totally enclosed air-cooled IP55 Class F electric motors, complying with IE3 and Nema Premium efficiency standards shall be used; motors with lower ratings are not acceptable. The compressor shall be fitted with a high-definition

colour display controller and electronic zero-loss water drains. The noise level of the compressor shall be maximum 65dB(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

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

Contaminant	Threshold
H ₂ O	67 ppm v/v
Dry particulates	Free from visible particulates in a 75 litre sample
Oil (droplet or mist)	0.1 mg/m ³
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

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.

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 $\pm 3^{\circ}\text{C}$ 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

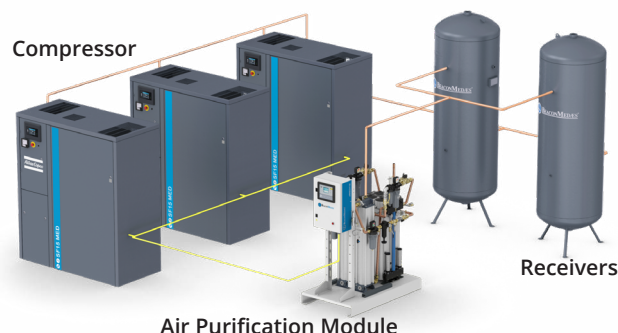
Air receivers shall comply with PED 2014/68/EU, supplied with relevant test certificates. Each air receiver shall be of steel construction with powder coating for protection (CE standard) or shall be hot dip galvanised inside and out (MOM standard) and fitted with a zero loss electronic drain valve. 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
- 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 CO₂ monitors including full integration into the ES-MED central controller giving alarm warnings when unacceptable CO and CO₂ 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.

Unique Selling Proposition

SF 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 **Extremely Silent:** The slow speed of the scroll compression element, the sound-insulated canopy and the optimized fan ensure that the SF compressors are extremely quiet, with sound levels as low as 53dB(A).
- 3 **Energy Efficient:** By adjusting the amount of running scroll elements, the output flow rate of the compressor is matched as close as possible to the air demand from the hospital, resulting into lower power consumption.
- 4 **Increased Redundancy:** A shutdown of one scroll element will not cause the full unit to stop; continued operation with reduced capacity is guaranteed.
- 5 **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. 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.



Compressor Selection Table

SF-MED (Scroll) Oil-free Compressor Selection Table - Fixed Speed 60Hz

Model Name	SF8+ MED	SF11+ MED	SF15+ MED	SF17+ MED	SF22+ MED
Output flow (litres/minute) * 8 bar variant	804	1218	1608	1836	2436
Output flow (litres/minute) * 10 bar variant	678	900	1356	1500	1782
Footprint L x W x H (mm)	1670 x 750 x 1230	1670 x 750 x 1230	1628 x 750 x 1844	1628 x 750 x 1844	1628 x 750 x 1844
Compressor weight (kg)	450	450	550	565	650
Service connection (mm)	28	28	28	28	28
Noise level/pump (dB[A])	63	63	63	64	65
Maximum ambient temperature (°C)	46	46	46	46	46
Supply voltage (v)	380	380	380	380	380
Supply frequency (Hz)	60	60	60	60	60
Nominal motor rating (kW)	8	11	15	17	22
Full load current per compressor (A) 8bar/10bar	15.2	20.9	28.5	32.3	41.8
ISO Part Number - 8 bar	8102 3405 49	8102 3405 51	8102 3405 59	8102 3405 61	8102 3405 63
HTM Part Number - 8 bar	8102 3405 50	8102 3405 52	8102 3405 60	8102 3405 62	8102 3405 64
ISO Part Number - 10 bar	8102 3398 97	8102 3398 99	8102 3399 07	8102 3399 09	8102 3399 11
HTM Part Number - 10 bar	8102 3398 98	8102 3399 00	8102 3399 08	8102 3399 10	8102 3399 12

*Output flow stated at reference conditions

Receiver Selection Table

Standard CE - Steel Powder Coated

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

* 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), safety pressure relief valve, fusible plug, copper inlet and outlet union connection pipes (each with isolation valve).

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), safety pressure relief valve, copper inlet and outlet union connection pipes (each with isolation valve).

Receiver by-pass assembly**	2005137	
-----------------------------	---------	--

**For systems using a single receiver, HTM requires a receiver by-pass kit to be installed

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 above 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 (mm2/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 (mm2/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.

Dryer Options

Model Name	
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	1609 1038 00

* Only up to 10bar

Air Plant Selection Table
HTM02-01 Medical Air 4 bar 60Hz
SF MED Fixed Speed Scroll Compressors, dMED dryer (Standard QDT)

Model Name	mAIR-TSF	mAIR-TSF	mAIR-TSF	mAIR-TSF	mAIR-QSF	mAIR-QSF	mAIR-PSF
Model Description	mAIR-TSF4-626-HTM 02-01 60Hz	mAIR-TSF4-989-HTM 02-01 60Hz	mAIR-TSF4-1454-HTM 02-01 60Hz	mAIR-TSF4-1977-HTM 02-01 60Hz	mAIR-QSF4-2451-HTM 02-01 60Hz	mAIR-QSF4-3751-HTM 02-01 60Hz	mAIR-PSF4-5779-HTM 02-01 60Hz
Design Flow (L/min) *	626	989	1454	1977	2451	3751	5779
Number of compressors	3	3	3	3	4	4	5
Duty Compressors	1	1	1	1	2	2	3
Standby Compressors	2	2	2	2	2	2	2
Type of compressor	SF MED8 8 Bar	SF MED11 8 Bar	SF MED17 8 Bar	SF MED22 8 Bar	S MED15 8 Bar	SF MED22 8 Bar	SF MED22 8 Bar
Type of dryer	dMED 35 7.5 Bar	dMED 46 7.5 Bar	dMED 75 7.5 Bar	dMED 90 7.5 Bar	dMED 150 7.5 Bar	dMED 220 7.5 Bar	dMED 300 7.5 Bar
Number of receivers	2	2	2	2	2	2	2
Receiver volume (l) (each)	500L 11 Bar	500L 11 Bar	500L 11 Bar	500L 11 Bar	1000L 11 Bar	1000L 11 Bar	2000L 11 Bar
Part Number (With Vessels)	4233 6015 42	4233 6015 43	4233 6015 44	4233 6015 45	4233 6015 46	4233 6015 47	4233 6015 48
Part Number (Without Vessels)	4233 6016 05	4233 6016 06	4233 6016 07	4233 6016 08	4233 6016 09	4233 6016 10	4233 6016 11

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

HTM2022 Medical Air 4 bar 60Hz
SF MED Fixed Speed Scroll Compressors, dMED dryer (Standard QDT)

Model Name	mAIR-DSF	mAIR-DSF	mAIR-DSF	mAIR-DSF	mAIR-TSF	mAIR-TSF	mAIR-QSF
Model Description	mAIR-DSF4-626-HTM 2022 60Hz	mAIR-DSF4-989-HTM 2022 60Hz	mAIR-DSF4-1226-HTM 2022 60Hz	mAIR-DSF4-1977-HTM 2022 60Hz	mAIR-TSF4-2451-HTM 2022 60Hz	mAIR-TSF4-3751-HTM 2022 60Hz	mAIR-QSF4-5779-HTM 2022 60Hz
Design Flow (L/min) *	626	989	1226	1977	2451	3751	5779
Number of compressors	2	2	2	2	3	3	4
Duty Compressors	1	1	1	1	2	2	3
Standby Compressors	1	1	1	1	1	1	1
Type of compressor	SF MED8 8 Bar	SF MED11 8 Bar	SF MED15 8 Bar	SF MED22 8 Bar	SF MED15 8 Bar	SF MED22 8 Bar	SF MED22 8 Bar
Type of dryer	dMED 35 7.5 Bar	dMED 46 7.5 Bar	dMED 75 7.5 Bar	dMED 90 7.5 Bar	dMED 150 7.5 Bar	dMED 220 7.5 Bar	dMED 300 7.5 Bar
Number of receivers	1	1	1	1	1	1	1
Receiver volume (l) (each)	1000L 11 Bar	1000L 11 Bar	1500L 11 Bar	1500L 11 Bar	2000L 11 Bar	2000L 11 Bar	3000L 11 Bar
Part Number (With Vessels)	4233 6015 72	4233 6015 73	4233 6015 74	4233 6015 75	4233 6015 76	4233 6015 77	4233 6015 78
Part Number (Without Vessels)	4233 6016 35	4233 6016 36	4233 6016 37	4233 6016 38	4233 6016 39	4233 6016 40	4233 6016 41

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

HTM02-01 Combined Air 7 bar 60Hz

SF MED Fixed Speed Scroll Compressors, dMED dryer (Standard QDT)

Model Name	cAIR-TSF	cAIR-TSF	cAIR-TSF	cAIR-QSF	cAIR-QSF	cAIR-PSF	cAIR-PSF	cAIR-HSF
Model Description	cAIR-TSF7-828-HTM 02-01 60Hz	cAIR-TSF7-1358-HTM 02-01 60Hz	cAIR-TSF7-1686-HTM 02-01 60Hz	cAIR-QSF7-2714-HTM 02-01 60Hz	cAIR-QSF7-3618-HTM 02-01 60Hz	cAIR-PSF7-4500-HTM 02-01 60Hz	cAIR-PSF7-5090-HTM 02-01 60Hz	cAIR-HSF7-6746-HTM 02-01 60Hz
Design Flow (L/min) *	828	1358	1686	2714	3618	4500	5090	6746
Number of compressors	3	3	3	4	4	5	5	6
Duty Compressors	1	1	1	2	2	3	3	4
Standby Compressors	2	2	2	2	2	2	2	2
Type of compressor	SF MED8 10 Bar	SF MED15 10 Bar	SF MED22 10 Bar	SF MED15 10 Bar	SF MED22 10 Bar	SF MED17 10 Bar	SF MED22 10 Bar	SF MED22 10 Bar
Type of dryer	dMED 25 10 Bar	dMED 45 10 Bar	dMED 75 10 Bar	dMED 90 10 Bar	dMED 110 10 Bar	dMED 150 10 Bar	dMED 220 10 Bar	dMED 300 10 Bar
Number of receivers	2	2	2	2	2	2	2	2
Receiver volume (l) (each)	1000L 11 Bar	1000L 11 Bar	1000L 11 Bar	1500L 11 Bar	2000L 11 Bar	2000L 11 Bar	2000L 11 Bar	3000L 11 Bar
Part Number (With Vessels)	4233 6015 57	4233 6015 58	4233 6015 59	4233 6015 60	4233 6015 61	4233 6015 62	4233 6015 63	4233 6015 64
Part Number (Without Vessels)	4233 6016 20	4233 6016 21	4233 6016 22	4233 6016 23	4233 6016 24	4233 6016 25	4233 6016 26	4233 6016 27

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

HTM2022 Combined Air 7 bar 60Hz

SF MED Fixed Speed Scroll Compressors, dMED dryer (Standard QDT)

Model Name	cAIR-DSF	cAIR-DSF	cAIR-DSF	cAIR-TSF	cAIR-TSF	cAIR-QSF	cAIR-QSF	cAIR-PSF	cAIR-HSF
Model Description	cAIR-DSF7-773-HTM 2022 60Hz	cAIR-DSF7-1271-HTM 2022 60Hz	cAIR-DSF7-1400-HTM 2022 60Hz	cAIR-TSF7-2253-HTM 2022 60Hz	cAIR-TSF7-3003-HTM 2022 60Hz	cAIR-QSF7-3735-HTM 2022 60Hz	cAIR-QSF7-4581-HTM 2022 60Hz	cAIR-PSF7-6007-HTM 2022 60Hz	cAIR-HSF7-7381-HTM 2022 60Hz
Design Flow (L/min) *	773	1271	1400	2253	3003	3735	4581	6007	7381
Number of compressors	2	2	2	3	3	4	4	5	6
Duty Compressors	1	1	1	2	2	3	3	4	5
Standby Compressors	1	1	1	1	1	1	1	1	1
Type of compressor	SF MED11 10 Bar	SF MED17 10 Bar	SF MED22 10 Bar	SF MED15 10 Bar	SF MED22 10 Bar	SF MED17 10 Bar	SF MED22 10 Bar	SF MED22 10 Bar	SF MED22 10 Bar
Type of dryer	dMED 25 10 Bar	dMED 46 10 Bar	dMED 75 10 Bar	dMED 90 10 Bar	dMED 110 10 Bar	dMED 150 10 Bar	dMED 150 10 Bar	dMED 220 10 Bar	dMED 300 10 Bar
Number of receivers	1	1	1	1	1	1	1	2	2
Receiver volume (l) (each)	1000L 11 Bar	1500L 11 Bar	1500L 11 Bar	2000L 11 Bar	2000L 11 Bar	3000L 11 Bar	3000L 11 Bar	2000L 11 Bar	2000L 11 Bar
Part Number (With Vessels)	4233 6015 88	4233 6015 89	4233 6015 90	4233 6015 91	4233 6015 92	4233 6015 93	4233 6015 94	4233 6015 95	4233 6015 96
Part Number (Without Vessels)	4233 6016 51	4233 6016 52	4233 6016 53	4233 6016 54	4233 6016 55	4233 6016 56	4233 6016 57	4233 6016 58	4233 6016 59

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