27+ YEARS OF EXCELLENCE

summits
Enabling Innovation. Enhancing Lives.

Meets International Standards

- ✓ HTM 02-01
- ✓ NFPA 99
- ✓ ISO 7396
- ✓ ISO 13485

NEW DIMENSIONS SOLUTIONS

Medical Air Dryer
mLife & mLife+

- Premium at every stage
- Medical grade air with -46°C ADP as per HTM 02-01
- Catalyse Carbon monoxide conversion
- Bacteria filter for Absolute retention rate of 0.22µm particle down to 99.9999%
- Oil Check apparatus for air quality validation
- Auto Change over ensures medical air 24/7

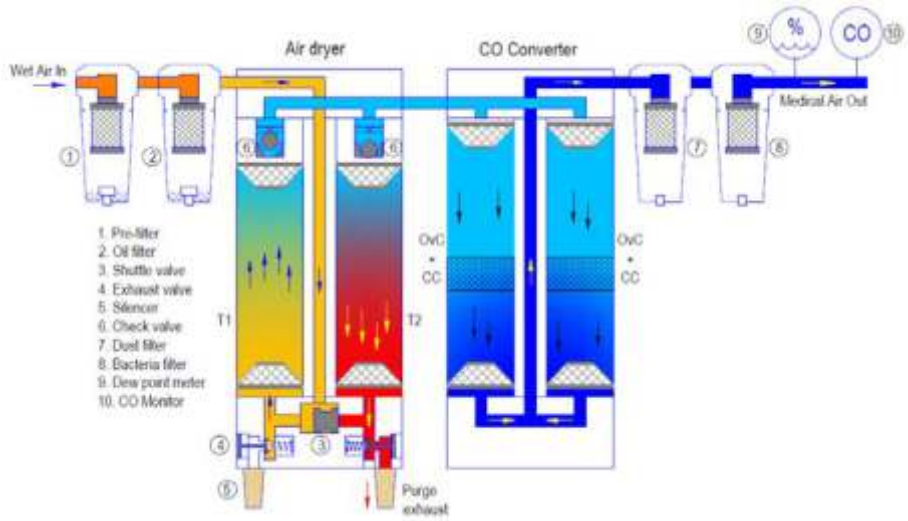
ASME U ASME U2 ASME UM

High importance of Medical air in healthcare industries:

Medical air is primarily used in hospitals, clinics, and other healthcare facilities for aerosol drug delivery, high flow therapy, mechanical ventilation, neonatal environment control, infant resuscitation, general anaesthesia, and hyperbaric therapy. It is also used for cleaning and drying medical instruments and equipment, powering certain medical tools.

Compressed air to Medical air by mLife+:

Coalescing type Pre-filter (1) of 5µ and Oil filter (2) of 0.01µ removes bulk moisture and liquid oil from the compressed air. This pre-treated air diffuses to the bottom of the Tower (T1) and passes through the desiccant bed. This desiccant bed besides adsorbing moisture and dries the air, it also adsorbs CO2. Dry air leaves the Tower (T1) and passes through OvC + CC unit. OvC stands for Oil vapour capturing unit. CC stands for Catalytic converter. As the name implies, OvC adsorbs Oil vapour and CC converts Carbon monoxide to Carbon dioxide. Dust filter (7) of 1µ removes particulates. Bacteria filter (8) filters the air out of microorganisms, such as bacteria, parasites, fungi down to 0.22 micron at 99.9999% efficiency. Thus, ultra-purified medical grade air is ready for utilization.



Schematic diagram of mLife+

The desiccant can adsorb only certain quantity of moisture and will reach equilibrium after certain time. It can no longer dries the air to the required dew point and should be regenerated to keep the process continuous. To regenerate the Tower (T1), some partial quantity of dry air coming out of Tower (T2) is diverted to Tower (T1). This Dry air expands to atmospheric pressure and become subsaturated. This subsaturated dry air purges out all moisture from the Tower (T1) and makes it ready for next adsorption.Air flow is diverted to each Tower alternatively by valves and controller.

Standards for health care service:

ISO 7396, HTM 02-01 & NFPA 99 are the globaly recognized standard for assuring high quality health services where it matters most.

One step ahead

Medical air quality from mLife+

SN.	*Contaminants*	*ISO 7396*	*HTM 02-01*	*Typical value# from mLife+*
1.	O_2 (v/v) %	20.4 to 21.4	20.4 to 21.4	20.9 ±0.2%
2.	Total Oil (mg/m3)	< 0.1	< 0.1	< 0.01
3.	CO (ml/m3)	< 5	< 5	< 2
4.	CO2 (ml/m3)	< 500	< 500	<280
5.	Water vapour (ml/m3)	< 67	< 67	<39
6.	SO2 (ml/m3)	< 1	< 1	<1
7.	NO + NO2 (ml/m3)	< 2	< 2	<2
8.	Particulate matters size	(Parts per m3)		
8a.	0.1µm to 0.5µm	< 4,00,000	Free from visible	< 3,20,000
8b.	0.5µm to 1.0µm	< 6,000	particles in a 75 L	< 5,300
8c.	1.0µm to 5.0µm	< 100	sample	< 100

Inlet condition: O2: 20.94%, CO: 20 ppm, CO2: 700 ppm

Premium at every stage

Large surface area

Pleated Borosilicate depth filter with large surface media at all micro filters offer No Drop in efficiency till its entire life.

Dewpoint dependent system (DDS)

Online dew point meter monitors outlet air dryness 24/7.

Dew point based purge ensures right quantity of purge according to end point consumption.

99.9999% Efficiency

Bacteria filter for Absolute retention rate of 0.22µm particle down to 99.9999%

Stainless steel

Unsurpassed structural strength and durability.

More hygienic and easier to clean than other solid surfaces.

Quite operation

Silent and No back pressure which hampers dew point.

Corrosion-resistant aluminium end covers for longer life.

Advanced PLC

Integrated PLC with numerous facilities, Controls, Maintenance alert and compatible to industries required communication protocol. RS485 Modbus, BMS, IOT , Ethernet, Industry 4.0

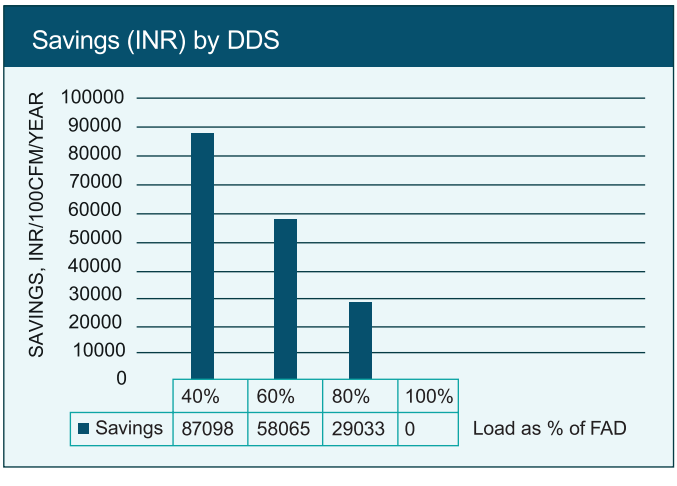
Catalytic Converter

Effectively destroy carbon monoxide ensures patient safety and meets international standards even in most polluted environment.

Monitor effortlessly

Pressure gauge at each adsorber and at In/out assist in ensuring proper functioning of system and to diagnose fault effortlessly.

Savings (INR) by DDS



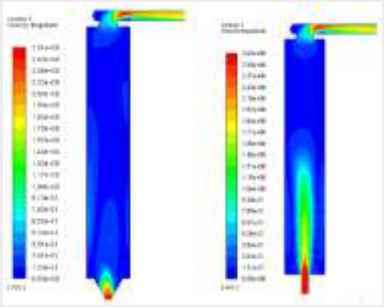
Uniform Distribution
Stainless steel Conical diffusers ensure uniform distribution of compressed air to desiccant bed and supports effective removal of moisture at every milli-meter travel of compressed air during drying process

Safety
Online carbon monoxide instrument monitors outlet air CO content 24 x 7
Triggers emergency alarm if CO level exceeds 10 ppm

Longer MTBM
Honed cylinder for piston movement; Double spring for piston retraction;
U cup seal for Proportional sealing;
PTFE guide ring prevents metallic contact and absorb travers force. All the above extends MTBM (Mean time between maintenance)

Oil check apparatus
Oil check apparatus (mLife+) helps to measure the oil content in the outlet air down to 0.1 to 0.2mg/m3

Engineered the best
Every parameter affecting the reliability is carefully analyzed and culminated using simulation techniques.



Extended Life
Filtered dry air for actuation of valves ensures longevity of valves operation.

mLife+: Flowrates and Dimension data:

Common data				Simplex					Duplex				
				Over all Dimension (mm)					Over all Dimension (mm)				
SN	Capacity (cfm)	In/Out (BSPP F)	Product Model	W	D	H	Weight (kg)	Product Model	W	D	H	Weight (kg)
1	10	1/2"	mLife+ 001 S	800	500	1050	80	mLife+ 001 D	1000	950	1050	160
2	20	1/2"	mLife+ 002 S	800	500	1100	98	mLife+ 002 D	1000	950	1100	196
3	40	3/4"	mLife+ 004 S	950	650	1065	115	mLife+ 004 D	1100	1150	1065	230
4	60	3/4"	mLife+ 006 S	950	650	1530	145	mLife+ 006 D	1100	1150	1530	290
5	80	1"	mLife+ 008 S	1035	750	1410	170	mLife+ 008 D	1200	1400	1460	340
6	100	1"	mLife+ 010 S	1035	750	1630	185	mLife+ 010 D	1200	1400	1680	370
7	125	1"	mLife+ 012 S	1035	750	1940	200	mLife+ 012 D	1200	1400	1990	400
8	150	1-1/2"	mLife+ 015 S	1100	1400	1330	255	mLife+ 015 D	2000	1600	1400	510
9	200	1-1/2"	mLife+ 020 S	1250	1650	1700	345	mLife+ 020 D	2100	1900	1700	690
10	250	2"	mLife+ 025 S	1250	1650	2100	380	mLife+ 025 D	2100	1900	2100	760

Note: Rating as per ISO 7183-2007, Option B.

Common technical data:	
Pressure	: 7 to 12 bar g
Inlet Temp.	: 45°C
Ambient temp.	: 40°C
Air humidity	: 100% at 45°C
Installation	: Indoor
Power supply	: 230VAC 50Hz

Nomenclature:
mLife+ 004 D →
mLife+: Series name
004 x 10 = 40 cfm
D: Duplex

Variants & Features

Scope	mLife	mLife+
Pre-filter	√	√
Oil filter	√	√
Air dryer	√	√
CO converter	–	√
Dust filter	√	√
Bacteria filter	√	√
Dew point meter	√	√
CO monitor	√	√
Pre-filter	√	√
Moisture indicator	√	√
Oil trace apparatus	–	√
DDS	√	√
PLC	√	√

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