

ULTRAAR[®] ESW

Oil-less Medical Air Plants



www.ultracontrolo.com.pt

Made in Portugal

ULTRAAR[®] ESW Oil-less Medical Air Plants

ULTRAAR®

ULTRAAR® ESW systems

ULTRAAR® is a registered trademark for the **totally oil-free** medical compressed air supply systems, designed and developed by ULTRA CONTROLO, and implemented since 1997 with the aim of providing the best quality breathable air that can be produced by the Hospital.

ULTRAAR® is one of the impressive outcomes of over 30 years of experience implementing new technologies in compressed air treatment systems and process control applied in hospital environments, by ULTRA CONTROLO's Engineering Department.

Touch-Screen Controllers QuAir 3



Air Treatment Units

ULTRAAR® systems have a **unique** multi-stage purification unit that converts a compressed air source into internationally certified breathing air.

Cover photo:
Catarina Miriam, 29 weeks,
1.26 kg, inhaling a mixture of
"medical air" and oxygen.
This is a common situation for all
premature Infants with respira-
tory distress!

Trouble free

With an **ULTRAAR®**, the hospital gets, once for all, free of all the dangers related to the production of **poor medical air quality**, due to the oil injection into medical air network, carried out by oil lubricated screw, vane or piston compressors in the existing installations.

Hospitals will get rid of other problems which results from the frequent oil spills in the ground or released to the environment during pressure release in idle operation of the compressor. Besides, hospitals will avoid the huge costs of separation and collection of oils from the condensate network, ending all the filth that pervades the 'medical' air

ULTRAAR® secrets

The installation of an **ULTRAAR®**, rated as class IIb, active medical device, provides to any hospital complete peacefulness and security in production of medical air, considered today by the European Pharmacopoeia as a medicine.

Possessing a medical compressed supply plant, **ULTRAAR®**, the Hospitals enhance the quality of service given to patients, since they guarantee the delivery of medical air truly breathable, completely free of contaminants. Also, it provides an excellent contribution in reducing expenditure on the production of medical air and contributes to the preservation of our planet, since it uses completely clean



CE
0120

**Totally Oil Free Medical Air Plant
ULTRAAR® ESW**

the right decision

Regulation compliance

ULTRAAR[®] medical air supply systems, produces breathable air in the more safe and secure way without any risks to health and with a quality that **surpasses all international requirements** in force, including European Pharmacopoeia.

ULTRAAR[®] is constructed according to EN ISO 7396-1 standard and fulfills HTM 02 Technical Specifications. **ULTRAAR**[®] bears the CE-medical mark (**CE 0120**) complying the European Directive 93/42/EEC.

Furthermore, **ULTRAAR**[®] systems are manufactured under an ISO 13485:2003 Quality Management Systems.

Basic configuration

- 1, 2, 3 or more oil-less compressors
- 1, 2, 3 air treatment units and air dryers equipped with 'zero-loss' electronic condensate drains
- 1 or more electrical control panel
- 1, 2 or more air receivers
- 1, 2 or 3 sets of pressure reduction system with pressure gauges including sterile filters, isolation valves and test valves
- 1 set of valves and safety devices for smooth operation and long life of the equipment

Oil-less compressor

ULTRAAR[®] are equipped with the latest technology of oil-less piston compressors.

ULTRACECO ESW .These compressors are equipped with high efficiency electric motors, protective inlet filter, unloading valves and safety valves in every skid and a large surface cooler.

Electric Control Box

- Analogue Control
- Digital Control
- ULTRACON console with digital and PC communication for Building Management System and/or central alarm network
- Remote monitoring system 24h available



With the Oil-less Piston Compressors, ULTRACECO COLOSSUS, the preventive maintenance is performed within a few instants. They also represent savings in the costs of service and replacement pieces.

Receivers

Receivers in vertical construction with capacities from 0.2 to 6 m³, hot-dip galvanized treatment, painted outside with epoxy, and fitted with safety devices: Calibrated safety valve, calibrated pressure gauge, manual drain valve and automatic electronic drain valve with stainless steel mesh filter. Prepared to receive an additional emergency compressor.

Air quality in accordance with the European Pharmacopoeia

Particles	< 1 µm
Oil (fluid phase)	Exempt
Oil vapor and hydrocarbons	Exempt
CO ₂	< 500 ppm
CO	< 5 ppm
SO ₂	< 1 ppm
NO _x	< 2 ppm
Working dew point	- 46 ° C
Maximum dew point	- 70 ° C
Tastes and smells	Exempt

Residual contents in initial operation conditions .

*We project and conceive Medical Air Plants **ULTRAAR**[®] ESW with 1 to 8 compressors and with other different configurations.*

Besides, we can recommend you the best solutions for your needs according to the work regime and your technical specifications. We can also optimize the existent Medical Air Plant, reducing the operation costs.

For any enquiry, feel free to contact our Engineering Department.

Proven Quality year after year

- **Perfect control of the air quality** delivered to the patient, **totally risk-free**
- **Clean air production process** complying with the Directive 96/61 EEC, **environmentally friendly**
- **Pressure losses permanently very low**, keeping over use, **a constant flow**
- Ultragest control and **unclogged filter** provide **low power consumption and money savings in spare parts**

More information at our website: www.ultracontrollo.com.pt

ULTRAAR®

Raising medical gases quality standards

ULTRAAR ESW

- ◆ *Totally Oil-free Medical Air*
- ◆ *Medical Device certification class IIb*
- ◆ *Permanently clean Medical Air Network*
- ◆ *Reduced Operation Costs*
- ◆ *Permanently Clean Filters*
- ◆ *Prolonged Maintenance Intervals*
- ◆ *Low noise sound*
- ◆ *Modular and versatile compressor unit*
- ◆ *2 years warranty*



Model	Pressure		Capacity				Motor	
	bar	psig	l/s	m ³ /min	cfm	m ³ /h	kw	hp
ESW 101	10	145	1,2	0,07	2,5	4,2	0,75	1
ESW 102	10	145	2,5	0,15	5	9	1,5	2
ESW 103	10	145	3,6	0,2	7	12	2,2	3
ESW 105	10	145	5,5	0,3	11	18	4	5
ESW 107	10	145	9	0,5	19	30	5,5	7
	14	203	8,6	0,5	18	30	5,5	7
ESW 110	10	145	12	0,7	26	42	7	10
	14	203	11	0,7	24	42	7	10
ESW 115	10	145	17	1	37	60	11	15
	14	203	17	1	36	60	11	15
ESW 201	10	145	2,4	0,14	5	8,4	2 x 0,75	2 x 1
ESW 202	10	145	5	0,3	10	18	2 x 1,5	2 x 2
ESW 203	10	145	7,2	0,5	15	30	2 x 2,2	2 x 3
ESW 205	10	145	11	0,6	23	36	2 x 4,0	2 x 5
ESW 207	10	145	18	1	38	60	2 x 5,5	2 x 7
	14	203	17	1	36	60	2 x 5,5	2 x 7
ESW 210	10	145	25	1,5	53	90	2 x 7,5	2 x 10
	14	203	23	1,4	48	84	2 x 7,5	2 x 10
ESW 215	10	145	35	2	74	120	2 x 11	2 x 15
	14	203	34	2	72	120	2 x 11	2 x 15

Capacities measured acc. to ISO I217, Annex C, latest version. Noise level measured at 1 m acc. PneuropCagi PN8NTC2. Technical changes can be done without previous notice.

Reference conditions: Inlet absolute pressure 1 bar, Suction temperature 20°C (68°F).

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