

Anaesthetic Gas Scavenging System ULTRASEG® SIMPLEX EUROPEAN STANDARD EN ISO 7396-2 TECHNICAL SPECIFICATION

ULTRASEG

The Anaesthetic Gas Scavenging, ULTRASEG comply with HTM 02-01, HTM2022 and either EN ISO 7396-2 or BS 6834. The AGS system is specifically designed for waste anaesthetic gas.

It provides a maximum flow rate of 80 l/min (EN ISO 7396-2) or 130 l/min (BS 6834) with a 1 kPa resistance to flow, and a minimum of 50 l/min (EN ISO 7396-2) or 80 l/min (BS 6834) with a 2 kPa (EN ISO 7396-2) or 4 kPa (BS 6834) resistance to flow at each terminal unit, irrespective of the number of terminal units in use.

The AGS system is built with side channel blowers in a simplex or duplex configuration.

The ULTRASEG pump assemblies are skid mounted and included on the skid shall be the simplex or duplex pump(s), motor control unit(s) with starter/isolator, moisture drain flask and flexible connector(s) to connect the plant to the pipeline.

Each pump includes an electric motor directly coupled impeller assembly. Impeller bearings in the pump(s) does not require lubrication. The pump(s) are air cooled and rated for continuous operation.



Vacuum/Flow Regulating Valve

A vacuum/flow regulating valve is provided and positioned in the pump manifold, comprised of a spring-loaded plate valve and inlet silencer. The valve is changeable with the pipeline inlet in order to provide flexibility on site. The plate shall control air ingress into the pipeline system, thereby controlling the vacuum level within. An air inlet filter as standard is available to ensure the intake air quality and long life of the system.

Additional in line vacuum/flow regulating valves can be installed if required. The vacuum/flow regulating valve ensure a maximum vacuum of 200 mbar below atmospheric pressure is not exceeded and shall be factory pre-set at 150mb.



Due to the continuous improvement of our products, the right is reserved to change the specification of the items described herein at any time. Please contact us for further information and up to date specifications.

Control System

Each motor control panel incorporate an emergency panel isolation switch facility, which controls all electrical power to the exhauster unit, remote start switch panels and system indication lights. All control and status indication circuitry is limited to 24V a.c. A green 'POWER ON' indicator is fitted to the starter/isolator panel, and illuminates whenever power is available to the 24V control and indication circuit. A 'HAND/OFF/AUTO' switch is provided to control operation of the pump, running the pump continuously when selected to 'HAND'. When selected to 'AUTO', control of the pump shall be passed to the remote start switch panels. Operation of any of the remote start switches shall activate the pump. The pump shall continue to run until all remote switches are selected 'OFF'.

The starter/isolator panel incorporate a thermal protection overload device. The thermal protection overload device also monitor the electrical power supply and phase input. In the event of a fault, the overload device shall break the circuit to the pump, preventing operation until the system is manually re-set. Operation of the overload device also break the circuit to the remote start switch panels, extinguishing the green running indicator.

Simplex starter/isolator panels c/w alarm pressure switch and duplex units incorporate line pressure switch. This line pressure switch monitors vacuum levels and provides an additional control of the remote start switch and starter/isolator panel green 'RUNNING' indicators. The pressure switch also include a digital display providing an accurate readout of the vacuum level in the pipeline in order to assist with installation/commissioning and annual re-commissioning.

Simplex installations shall use remote start switches that include a red 'PLANT EMERGENCY' indicator. This indicator shall illuminate on all remote start switch panels if the vacuum level falls below the pressure switch set point level when the pump has been called, or if the overload trips. The on/off rocker switch shall include a green illuminated surround to indicate 'mains on'.

Duplex installations use remote start switches that include an amber 'PLANT FAULT' indicator. This illuminate, if either pump is set to 'HAND', or if one of the overloads trip. A red 'PLANT EMERGENCY' indicator shall also be provided and shall illuminate on all remote start switch panels if the vacuum level falls below the pressure switch set point level when the pump has been called. The on/off rocker switch include a green illuminated surround to indicate 'mains on'.

Where a duplex system is installed each pump is controlled by a separate motor control panel to enable servicing of either pump or control gear whilst maintaining system operation.

Volt free relay kits for replicating alarm conditions to BMS shall be available as an optional extra. To be either installed either at factory or as a retro-fit kit for onsite installation.

Terminal Units

Terminal units can be provided with an adjustable orifice to allow balancing of the terminal unit flows during commissioning. Terminal units cannot be connected to the medical vacuum system.

CE Marking

The standard range of ULTRA CONTROLOs ULTRASEG Anaesthetic Gas Scavenging System are 'CE' marked under the Medical Devices Directive 93/42/EEC with approval from notified body no. 0120 (SGS-UKAS United Kingdom). Under this directive, the specified products are classified as Class IIb Medical Devices.



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**Anaesthetic Gas Scavenging System
ULTRASEG®
EUROPEAN STANDARD EN ISO 7396-2
400V 50Hz
SIMPLEX**

ULTRASEG						
400V 50Hz						
Model	Motor power	System capacity	Vacuum Connections		Weight	Article Number
	Kw	m3/h	dP(kPa)	IN/OUT	Kg	
H 50	0,55	50	23 / 27	1 1/4"	61	306.01.00000
H 65	0,55	65	28 / 34	1 1/4"	62	306.01.00001
H 90	1,1	90	30 / 38	1 1/4"	77	306.01.00002
H 120	1,5	120	31 / 34	1 1/4"	84	306.01.00003
H 170	2,2	170	30 / 32	1 1/4"	89	306.01.00004
E 50	0,2	50	9/12	1 1/4"	54	306.01.00005
E 80	0,4	79	12/15	1 1/4"	55	306.01.00006
E 100	0,4	103	12/15	1 1/4"	56	306.01.00007
E 140	0,85	143	16 / 16	1 1/2"	58	306.01.00008
E 180	1,3	180	18 / 18	1 1/2"	63	306.01.00009
E 200	1,6	210	20 / 22	2"	68	306.01.00010
E 300	2,2	315	19 / 19	2"	72	306.01.00011

Dimensions (L x W x H) Simplex: 800x1100x650 mm
Motor voltage (V) at 50 Hz: 200 - 240 Δ / 345 - 415 Y



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**Anaesthetic Gas Scavenging System
ULTRASEG®
EUROPEAN STANDARD EN ISO 7396-2
380V 60Hz
SIMPLEX**

ULTRASEG						
380V 60Hz						
Model	Motor power	System flow	Vacuum Connections		Weight	Article Number
	Kw	m3/h	dP(kPa)	IN/OUT	Kg	
H 50	0,63	58	23 / 27	1 1/4"	61	306.01.00400
H 65	0,63	80	28 / 34	1 1/4"	62	306.01.00401
H 90	1,3	105	30 / 38	1 1/4"	77	306.01.00402
H 120	1,75	145	31 / 34	1 1/4"	84	306.01.00403
H 170	2,55	195	30 / 32	1 1/4"	89	306.01.00404
E 50	0,23	60	9/12	1 1/4"	54	306.01.00405
E 80	0,5	98	12/15	1 1/4"	55	306.01.00406
E 100	0,5	120	12/15	1 1/4"	56	306.01.00407
E 140	0,95	174	16 / 16	1 1/2"	58	306.01.00408
E 180	1,5	220	18 / 18	1 1/2"	63	306.01.00409
E 200	2,05	251	20 / 22	2"	68	306.01.00410
E 300	2,55	376	19 / 19	2"	72	306.01.00411

Dimensions (L x W x H) Simplex: 800x1100x650 mm
 Motor voltage (V) at 60 Hz: 220 - 275 Δ / 380 - 480 Y