mVAC Medical Vacuum Supply System 380V 50Hz – EN ISO 7396-1/HTM 02-01 and HTM2022 - WUX

SPECIFICATION

mVAC Medical Vacuum Supply System

The mVAC Medical Vacuum Supply System shall conform to EN ISO 7396-1/ NHS Health Technical Memorandum No. 02-01 (HTM 02-01) or NHS Health Technical Memorandum No. 2022 (HTM 2022) - depending on model selected. The Medical Vacuum Supply System shall ensure the minimum pipeline vacuum level of -450mmHg is maintained at the plant service connection point at the rated volumetric 'free air' flow rate with either two pumps in standby (ISO7396-1/HTM02-01) or with one pump on standby (HTM2022). The bacteria filtration system shall be 'duplexed' such that each filter can be isolated for replacement of the filter cartridge.

Vacuum Pumps

Vacuum pumps shall be air-cooled, oil lubricated rotary vane type suitable for both continuous and frequent start/stop operation at nominal inlet vacuum levels of between -578mmHg and -728mmHg. Composite carbon fiber rotor blades shall be fitted to minimize the cost of maintenance. Rotors shall be driven by TEFV, IE3 efficiency electric motors. Pump inlets shall include an integral non-return valve to prevent oil suck back and pressure increases in the vacuum system. Each vacuum pump shall have an integral separator filter to ensure a virtually oil-free exhaust.

Each pump shall be fitted with anti-vibration pads between the pump foot and mounting frame. The pumps shall have synthetic oil to ensure a long service interval.

Bacteria Filters

The duplex bacteria filter system shall incorporate high efficiency filter elements. A differential vacuum indicator shall be installed across the filter to indicate blockage. Additional pressure sensors shall be installed at the inlet and outlet of the filter to measure the pressure drop across the filters. Each filter shall be designed and sized to carry the full plant design flow capacity with a pressure drop not exceeding 33mbar (25mmHg). Bacteria Filter elements shall have penetration levels not exceeding 0.005% when tested by the sodium flame method in accordance with BS 3928:1969 and utilizing particles in the 0.02 to 2 micron size range. Drain flasks shall be connected to each filter. Drain flasks shall be manufactured from transparent Pyrex® with a polymer coating on the inner and outer surfaces in order to maintain a seal in the event of inadvertent breakage of the Pyrex® flask. All drain flasks shall be suitable for sterilization and be connected via a manual isolating valve.

Control System

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 event log. The central control system shall operate at low voltage and include BMS connection for common fault. Visualization 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 4.3" high-definition touchscreen display with clear pictograms and LED indicators, providing easy access to system operational information. The controller shall be equipped with an integrated 2G/3G module for remote monitoring of the equipment.

Cascading of vacuum pumps shall be achieved by measuring the vacuum level at the plant inlet with a pressure transducer. A mechanical back-up facility shall ensure continued operation in the event of a control system malfunction. The control system shall normally employ automatic rotation of the lead pump to maximise pump life and ensure even wear.

Vacuum Receiver(s)

Vacuum receiver(s) shall be supplied with relevant test certificates and have a total volume of at least 100% of the plant output in 1 minute in terms of free air aspired at normal working pressure. Each vacuum receiver shall be painted.

Pyrex® is a registered trademark of Corning Glass.

mVAC Designation

A B C D E - F - G - H I J K - L

Variable	Definition	Allowable Value	Allowable Value Description
A	Model	mVAC	Medical Vacuum Supply System
B	System Flow	numbers	round down to 10
C	System Size	D	Duplex
		T	Triplex
		Q	Quadruplex
		P	Pentaplex
		H	Hexaplex
D	System setup	T	Tank Mounted
		M	Frame Mounted
		F	Floor Mounted
E	Tank Orientation	H	Horizontal
		V	Vertical
		N	No Vessel
F	Code	0201	HTM02-01
		2022	HTM2022
G	Pump model	40	MVS40
		65	MVS65
		100	MVS100
		220	MVS220
		300	MVS300
H	Manufacture Site	W	Wuxi
I	Panel Type	M	Mk5 Elektronikon
J	Voltage	E	380/3/50
		K	380/3/60
K	Starting Method	D	Direct on Line
L	Approval	CE	CE approval MDD/MDR
		CN	China Medical equipment approval
			No approval

Data Tables

HTM02-01 Tank Mounted

Model Name	mVAC360-TT	mVAC500-TT	mVAC1000-TT
Model Description	mVAC360TTH 02-01 65 WMED	mVAC500TTH 02-01 100 WMED	mVAC1000TTH 02-01 220 WMED
Plant Output (litres/minute)	360	500	1000
System Flow (m3/h)	58	80	160
System Flow (litres/minute)	960	1333	2667
Pump Model	MVS65	MVS100	MVS220
Unit Pump Flow (m3/h)	59	98	200
Number of pumps	3	3	3
Number of receivers	1	1	1
Receiver volume (litres)	500	500	1000
Total receiver volume (litres)	500	500	1000
Receiver connection(s) (mm)	n/a	n/a	n/a
Inlet/service connection (mm)	76	76	76
Exhaust connection (mm, per pump)	42	42	76
Maximum exhaust back pressure (mbar)	150	150	150
Noise level/pump (dBA)	60	61	69
Motor rating (kW)	1.5	2.2	4.5
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	3.7	4.55	10
FLC per pump (A)	4.1	5	11.5
Starting current (A)	24.6	30	69
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40
Cooling air flow per pump (m3/s)	0.1	0.2	0.3
Installation Proposal	4109990119	4109990119	4109990119
Part Number with vessel	4109000538	4109000550	4109005050
Part Number no vessel	n/a	n/a	n/a
Weight With Vessel (kg)	470	670	1000
Weight no vessel	n/a	n/a	n/a

- Plant Output in terms of free air aspired at a vacuum of -450 mmHg at the inlet connection with two pumps on standby and with a tolerance of ±10%.
- System Flow at atmospheric pressure at the inlet connection with two pumps on standby and with a tolerance of ±10%.
- Plant dimensions include the required space around the plant for maintenance access.
- Mean sound level measured at a distance of 1m as measured to ISO 2151 / DIN 45635.
- Electrical details are provided for guidance only and are referenced at 40°C ambient temperature. Site conditions may impose a larger cable size. For exact cable sizing, and fuse / MCB ratings, consult a qualified electrical engineer.
- Plant weight includes packaging for shipping purposes.

HTM2022 Tank Mounted

Model Name	mVAC270-DT	mVAC500-TT	mVAC730-TT	mVAC1000-TT
Model Description	mVAC270DTH 2022 40 WMED	mVAC500TTH 2022 40 WMED	mVAC730TTH 2022 65 WMED	mVAC1000TTH 2022 100 WMED
Plant Output (litres/minute)	270	500	730	1000
System Flow (m3/h)	43	80	117	160
System Flow (litres/minute)	720	1333	1947	2667
Pump Model	MVS40	MVS40	MVS65	MVS100
Unit Pump Flow (m3/h)	44	44	59	98
Number of pumps	2	3	3	3
Number of receivers	1	1	1	1
Receiver volume (litres)	500	500	1000	1000
Total receiver volume (litres)	500	500	1000	1000
Receiver connection(s) (mm)	n/a	n/a	n/a	n/a
Inlet/service connection (mm)	76	76	76	76
Exhaust connection (mm, per pump)	42	42	42	42
Maximum exhaust back pressure (mbar)	150	150	150	150
Noise level/pump (dBA)	58	58	60	61
Motor rating (kW)	1.1	1.1	1.5	2.2
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	2.7	3.7	2.7	3.7
FLC per pump (A)	3	4.1	3	4.1
Starting current (A)	18	24.6	18	24.6
Central control supply - single phase (mm2/Amps)	“2.5 (5)”	“2.5 (5)”	“2.5 (5)”	“2.5 (5)”
Maximum Inlet Temperature (°C)	40	40	40	40
Cooling air flow per pump (m3/s)	0.1	0.1	0.1	0.2
Installation Proposal	4109990119	4109990119	4109990119	4109990119
Part Number with vessel	4109000686	4109000690	4109000694	4109000702
Part Number no vessel	n/a	n/a	n/a	n/a
Weight With Vessel (kg)	400	450	470	670
Weight no vessel	n/a	n/a	n/a	n/a

- Plant Output in terms of free air aspired at a vacuum of -450 mmHg at the inlet connection with one pump on standby and with a tolerance of ±10%.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of ±10%.
- Plant dimensions include the required space around the plant for maintenance access.
- Mean sound level measured at a distance of 1m as measured to ISO 2151 / DIN 45635.
- Electrical details are provided for guidance only and are referenced at 40°C ambient temperature. Site conditions may impose a larger cable size. For exact cable sizing, and fuse / MCB ratings, consult a qualified electrical engineer.
- Plant weight includes packaging for shipping purposes.

HTM02-01 Frame Mounted

Model Name	mVAC270-TM	mVAC360-TM	mVAC500-QM	mVAC730-QM	mVAC1220-QM
Model Description*	mVAC270TMV 02-01 40 WMED	mVAC360TMV 02-01 65 WMED	mVAC500QMV 02-01 40 WMED	mVAC730QMV 02-01 65 WMED	mVAC1220QMV 02-01 100 WMED
Model Description	mVAC270TMN 02-01 40 WMED	mVAC360TMN 02-01 65 WMED	mVAC500QMN 02-01 40 WMED	mVAC730QMN 02-01 65 WMED	mVAC1220QMN 02-01 100 WMED
Plant Output (litres/minute)	270	360	500	730	1220
System Flow (m3/h)	43	58	80	117	195
System Flow (litres/minute)	720	960	1333	1947	3253
Pump Model	MVS40	MVS65	MVS40	MVS65	MVS100
Unit Pump Flow (m3/h)	44	59	44	59	98
Number of pumps	3	3	4	4	4
Number of receivers	1	1	1	2	3
Receiver volume (litres)	500	500	500	500	500
Total receiver volume (litres)	500	500	500	1000	1500
Receiver connection(s) (mm)	67	67	67	67	88
Inlet/service connection (mm)	67	67	67	67	88
Exhaust connection (mm, per pump)	42	42	42	42	67
Maximum exhaust back pressure (mbar)	150	150	150	150	150
Noise level/pump (dBA)	58	60	58	60	61
Motor rating (kW)	1.1	1.5	1.1	1.5	2.2
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	2.7	3.7	2.7	3.7	4.55
FLC per pump (A)	3	4.1	3	4.1	5
Starting current (A)	18	24.6	18	24.6	30
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40	40
Cooling air flow per pump (m3/s)	0.1	0.1	0.1	0.1	0.2
Installation Proposal	4109990479	4109990479	4109990479	4109990480	4109990481
Part Number with vessel	4109000351	4109000349	4109000337	4109000335	4109000333
Part Number no vessel	4109000930	4109000929	4109000923	4109000922	4109000921
Weight With Vessel (kg)	478	528	528	756	2400
Weight no vessel	300	350	350	400	600

*- if equipped with vessel

HTM02-01 Frame Mounted Continued

Model Name	mVAC2500-QM	mVAC3500-QM	mVAC5000-HM	mVAC5250-PM	mVAC7000-HM
Model Description*	mVAC2500QMV 02-01 220 WMED	mVAC3500QMV 02-01 300 WMED	mVAC5000HMV 02-01 220 WMED	mVAC5250PMV 02-01 300 WMED	mVAC7000HMV 02-01 300 WMED
Model Description	mVAC2500QMN 02-01 220 WMED	mVAC3500QMN 02-01 300 WMED	mVAC5000HMN 02-01 220 WMED	mVAC5250PMN 02-01 300 WMED	mVAC7000HMN 02-01 300 WMED
Plant Output (litres/minute)	2500	3500	5000	5250	7000
System Flow (m3/h)	400	560	800	840	1120
System Flow (litres/minute)	6667	9333	13333	14000	18667
Pump Model	MVS220	MVS300	MVS220	MVS300	MVS300
Unit Pump Flow (m3/h)	200	280	200	280	280
Number of pumps	4	4	6	5	6
Number of receivers	2	2	2	3	3
Receiver volume (litres)	1500	2000	2500	2000	2500
Total receiver volume (litres)	3000	4000	5000	6000	7500
Receiver connection(s) (mm)	76	76	76	76	76
Inlet/service connection (mm)	76	76	76	76	76
Exhaust connection (mm, per pump)	76	76	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150	150
Noise level/pump (dBA)	69	72	69	72	72
Motor rating (kW)	4.5	5.5	4.5	5.5	5.5
Motor cable size (mm2/Amps)	2.5 (17)	4 (23)	2.5 (17)	4 (23)	4 (23)
Motor rated supply per pump (A)	10	11.5	10	11.5	11.5
FLC per pump (A)	11.5	12.7	11.5	12.7	12.7
Starting current (A)	69	76.2	69	76.2	76.2
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40	40
Cooling air flow per pump (m3/s)	0.3	0.3	0.3	0.3	0.3
Installation Proposal	4109990480	4109990480	4109990480	4109990481	4109990481
Part Number with vessel	4109005061	4109000329	4109005069	4109000315	4109000301
Part Number no vessel	4109005064	4109000919	4109005071	4109000912	4109000905
Weight With Vessel (kg)	2650	3050	2650	3950	4500
Weight no vessel	1050	1250	1050	1550	1800

*- if equipped with vessel

- Plant Output in terms of free air aspired at a vacuum of -450 mmHg at the inlet connection with two pump on standby and with a tolerance of ±10%.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of ±10%.
- Plant dimensions include the required space around the plant for maintenance access.
- Mean sound level measured at a distance of 1m as measured to ISO 2151 / DIN 45635.
- Electrical details are provided for guidance only and are referenced at 40°C ambient temperature. Site conditions may impose a larger cable size. For exact cable sizing, and fuse / MCB ratings, consult a qualified electrical engineer.
- Plant weight includes packaging for shipping purposes.

HTM2022 Frame Mounted

Model Name	mVAC1220-TM	mVAC2000-TM	mVAC2500-TM	mVAC3750-QM
Model Description*	mVAC1220TMV 2022 100 WMED	mVAC2000TMV 2022 220 WMED	mVAC2500TMV 2022 220 WMED	mVAC3750QMV 2022 220 WMED
Model Description	mVAC1220TMN 2022 100 WMED	mVAC2000TMN 2022 220 WMED	mVAC2500TMN 2022 220 WMED	mVAC3750QMN 2022 220 WMED
Plant Output (litres/minute)	1220	2000	2500	3750
System Flow (m3/h)	195	320	400	600
System Flow (litres/minute)	3253	5333	6667	10000
Pump Model	MVS100	MVS220	MVS220	MVS220
Unit Pump Flow (m3/h)	98	200	200	200
Number of pumps	3	3	3	4
Number of receivers	1	1	1	2
Receiver volume (litres)	1500	2000	2500	2000
Total receiver volume (litres)	1500	2000	2500	4000
Receiver connection(s) (mm)	76	76	76	76
Inlet/service connection (mm)	76	76	76	76
Exhaust connection (mm, per pump)	42	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150
Noise level/pump (dBA)	61	69	69	69
Motor rating (kW)	2.2	4.5	4.5	4.5
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	4.55	10	10	10
FLC per pump (A)	5	11.5	11.5	11.5
Starting current (A)	30	69	69	69
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40
Cooling air flow per pump (m3/s)	0.2	0.3	0.3	0.3
Installation Proposal	4109990483	4109990483	4109990483	4109990484
Part Number with vessel	4109000373	4109005056	4109005054	4109005062
Part Number no vessel	4109002808	n/a	4109005059	4109005065
Weight With Vessel (kg)	1100	1800	1800	2650
Weight no vessel	600	n.a	750	1000

*- if equipped with vessel

HTM2022 Frame Mounted Continued

Model Name	mVAC5000-PM	mVAC5250-QM	mVAC7000-PM	mVAC8000-HM
Model Description*	mVAC5000PMV 2022 200 WMED	mVAC5250QMV 2022 300 WMED	mVAC7000PMV 2022 300 WMED	mVAC8000HMV 2022 300 WMED
Model Description	mVAC5000PMN 2022 200 WMED	mVAC5250QMN 2022 300 WMED	mVAC7000PMN 2022 300 WMED	mVAC8000HMN 2022 300 WMED
Plant Output (litres/minute)	5000	5250	7000	8000
System Flow (m3/h)	800	840	1120	1280
System Flow (litres/minute)	13333	14000	18667	21333
Pump Model	MVS220	MVS300	MVS300	MVS300
Unit Pump Flow (m3/h)	200	280	280	280
Number of pumps	5	4	5	6
Number of receivers	2	3	3	4
Receiver volume (litres)	2500	2000	2500	2000
Total receiver volume (litres)	5000	6000	7500	8000
Receiver connection(s) (mm)	76	76	76	76
Inlet/service connection (mm)	76	76	76	76
Exhaust connection (mm, per pump)	76	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150
Noise level/pump (dBA)	69	72	72	72
Motor rating (kW)	4.5	5.5	5.5	5.5
Motor cable size (mm2/Amps)	2.5 (17)	4 (23)	4 (23)	4 (23)
Motor rated supply per pump (A)	10	11.5	11.5	11.5
FLC per pump (A)	11.5	12.7	12.7	12.7
Starting current (A)	69	76.2	76.2	76.2
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40
Cooling air flow per pump (m3/s)	0.3	0.3	0.3	0.3
Installation Proposal	4109990484	4109990485	4109990485	4109990486
Part Number with vessel	4109005066	4109000378	4109000385	4109000392
Part Number no vessel	4109005068	4109002799	4109002792	4109002785
Weight With Vessel (kg)	3050	3650	4250	5000
Weight no vessel	1250	1100	1400	1650

*- if equipped with vessel

- Plant Output in terms of free air aspired at a vacuum of -450 mmHg at the inlet connection with one pump on standby and with a tolerance of ±10%.
- System Flow at atmospheric pressure at the inlet connection with two pumps on standby and with a tolerance of ±10%.
- Plant dimensions include the required space around the plant for maintenance access.
- Mean sound level measured at a distance of 1m as measured to ISO 2151 / DIN 45635.
- Electrical details are provided for guidance only and are referenced at 40°C ambient temperature. Site conditions may impose a larger cable size. For exact cable sizing, and fuse / MCB ratings, consult a qualified electrical engineer.
- Plant weight includes packaging for shipping purposes.

HTM02-01 Floor Mounted

Model Name	mVAC270-TF	mVAC360-TF	mVAC500-QF	mVAC730-QF	mVAC1220-QF
Model Description*	mVAC270TFV 02-01 40 WMED	mVAC360TFV 02-01 65 WMED	mVAC500QFV 02-01 40 WMED	mVAC730QFV 02-01 65 WMED	mVAC1220QFV 02-01 100 WMED
Model Description	mVAC270TFN 02-01 40 WMED	mVAC360TFN 02-01 65 WMED	mVAC500QFN 02-01 40 WMED	mVAC730QFN 02-01 65 WMED	mVAC1220QFN 02-01 100 WMED
Plant Output (litres/minute)	270	360	500	730	1220
System Flow (m3/h)	43	58	80	117	195
System Flow (litres/minute)	720	960	1333	1947	3253
Pump Model	MVS40	MVS65	MVS40	MVS65	MVS100
Unit Pump Flow (m3/h)	44	59	44	59	98
Number of pumps	3	3	4	4	4
Number of receivers	1	1	1	2	3
Receiver volume (litres)	500	500	500	500	500
Total receiver volume (litres)	500	500	500	1000	1500
Receiver connection(s) (mm)	28	28	28	28	28
Inlet/service connection (mm)	76	76	76	76	76
Exhaust connection (mm, per pump)	42	42	42	42	42
Maximum exhaust back pressure (mbar)	150	150	150	150	150
Noise level/pump (dBA)	58	60	58	60	61
Motor rating (kW)	1.1	1.5	1.1	1.5	2.2
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	4 (23)	4 (23)
Motor rated supply per pump (A)	2.7	3.7	2.7	3.7	4.55
FLC per pump (A)	3	4.1	3	4.1	5
Starting current (A)	18	24.6	18	24.6	30
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40	40
Cooling air flow per pump (m3/s)	0.1	0.1	0.1	0.1	0.2
Installation Proposal	4109990466	4109990466	4109990466	4109990466	4109990466
Part Number with vessel	4109000494	4109000493	4109000487	4109000486	4109000485
Part Number no vessel	4109003342	4109003341	4109003335	4109003334	4109003333
Weight With Vessel (kg)	300	350	350	400	600
Weight no vessel	260	310	310	360	540

HTM02-01 Floor Mounted Continued

Model Name	mVAC2500-QF	mVAC3500-QF	mVAC5000-HF	mVAC5250-PF	mVAC7000-HF
Model Description*	mVAC2500QFV 02-01 220 WMED	mVAC3500QFV 02-01 300 WMED	mVAC5000HFV 02-01 220 WMED	mVAC5250PFV 02-01 300 WMED	mVAC7000HFV 02-01 300 WMED
Model Description	mVAC2500QFN 02-01 220 WMED	mVAC3500QFN 02-01 300 WMED	mVAC5000HFN 02-01 220 WMED	mVAC5250PFN 02-01 300 WMED	mVAC7000HFN 02-01 300 WMED
Plant Output (litres/minute)	2500	3500	5000	5250	7000
System Flow (m3/h)	400	560	800	840	1120
System Flow (litres/minute)	6667	9333	13333	14000	18667
Pump Model	MVS220	MVS300	MVS220	MVS300	MVS300
Unit Pump Flow (m3/h)	200	280	200	280	280
Number of pumps	4	4	6	5	6
Number of receivers	2	2	2	3	3
Receiver volume (litres)	1500	2000	2500	2000	2500
Total receiver volume (litres)	3000	4000	5000	6000	7500
Receiver connection(s) (mm)	76	76	76	76	76
Inlet/service connection (mm)	76	76	76	76	76
Exhaust connection (mm, per pump)	76	76	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150	150
Noise level/pump (dBA)	69	72	69	72	72
Motor rating (kW)	4.5	5.5	4.5	5.5	5.5
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	4 (23)	4 (23)
Motor rated supply per pump (A)	10	11.5	10	11.5	11.5
FLC per pump (A)	11.5	12.7	11.5	12.7	12.7
Starting current (A)	69	76.2	69	76.2	76.2
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40	40
Cooling air flow per pump (m3/s)	0.3	0.3	0.3	0.3	0.3
Installation Proposal	4109990466	4109990466	4109990466	4109990466	4109990466
Part Number with vessel	4109005073	4109000483	4109005072	4109000476	4109000469
Part Number no vessel	n.a	4109003331	n.a	4109003324	4109003317
Weight With Vessel (kg)	1050	1250	1500	1550	1800
Weight no vessel	n.a	1190	n.a	1450	1700

*- if equipped with vessel

- Plant Output in terms of free air aspired at a vacuum of -450 mmHg at the inlet connection with two pump on standby and with a tolerance of ±10%.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of ±10%.
- Plant dimensions include the required space around the plant for maintenance access.
- Mean sound level measured at a distance of 1m as measured to ISO 2151 / DIN 45635.
- Electrical details are provided for guidance only and are referenced at 40°C ambient temperature. Site conditions may impose a larger cable size. For exact cable sizing, and fuse / MCB ratings, consult a qualified electrical engineer.
- Plant weight includes packaging for shipping purposes.

HTM 2022 Floor Mounted

Model Name	mVAC1220-TF	mVAC2500-TF	mVAC3750-QF	mVAC5000-PF
Model Description*	mVAC1220TFV 2022 100 WMED	mVAC2500TFV 2022 220 WMED	mVAC3750QFV 2022 220 WMED	mVAC5000PFV 2022 220 WMED
Model Description	mVAC1220TFN 2022 100 WMED	mVAC2500TFN 2022 220 WMED	mVAC3750QFN 2022 220 WMED	mVAC5000PFN 2022 220 WMED
Plant Output (litres/minute)	1220	2500	3750	5000
System Flow (m3/h)	195	400	600	800
System Flow (litres/minute)	3253	6667	10000	13333
Pump Model	MVS100	MVS220	MVS220	MVS220
Unit Pump Flow (m3/h)	98	200	200	200
Number of pumps	3	3	4	5
Number of receivers	1	1	2	2
Receiver volume (litres)	1500	2500	2000	2500
Total receiver volume (litres)	1500	2500	4000	5000
Receiver connection(s) (mm)	76	76	76	76
Inlet/service connection (mm)	76	76	76	76
Exhaust connection (mm, per pump)	42	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150
Noise level/pump (dBA)	61	69	69	69
Motor rating (kW)	2.2	4.5	4.5	4.5
Motor cable size (mm2/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	4.55	10	10	10
FLC per pump (A)	5	11.5	11.5	11.5
Starting current (A)	30	69	69	69
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40
Cooling air flow per pump (m3/s)	0.2	0.3	0.3	0.3
Installation Proposal	4109990467	4109990467	4109990467	4109990467
Part Number with vessel	4109000809	4109005074	4109005075	4109005076
Part Number no vessel	n.a	n.a	n.a	n.a
Weight With Vessel (kg)	500	650	950	1200
Weight no vessel	n.a	n.a	n.a	n.a

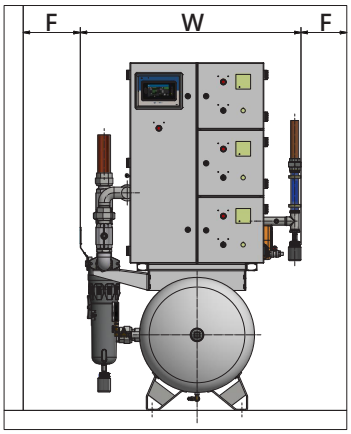
HTM2022 Floor Mounted Continued

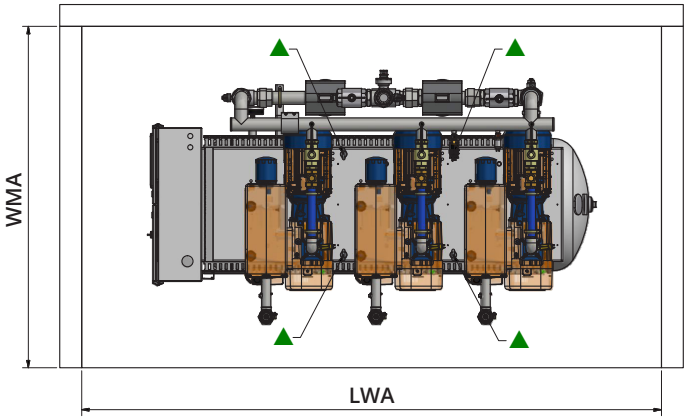
Model Name	mVAC5250-QF	mVAC7000-PF	mVAC8000-HF
Model Description*	mVAC5250QFV 2022 300 WMED	mVAC7000PFV 2022 300 WMED	mVAC8000HFV 2022 300 WMED
Model Description	mVAC5250QFN 2022 300 WMED	mVAC7000PFN 2022 300 WMED	mVAC8000HFN 2022 300 WMED
Plant Output (litres/minute)	5250	7000	8000
System Flow (m3/h)	840	1120	1280
System Flow (litres/minute)	14000	18667	21333
Pump Model	MVS300	MVS300	MVS300
Unit Pump Flow (m3/h)	280	280	280
Number of pumps	4	5	6
Number of receivers	3	3	4
Receiver volume (litres)	2000	2500	2000
Total receiver volume (litres)	6000	7500	8000
Receiver connection(s) (mm)	76	76	76
Inlet/service connection (mm)	76	76	76
Exhaust connection (mm, per pump)	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150
Noise level/pump (dBA)	72	72	72
Motor rating (kW)	5.5	5.5	5.5
Motor cable size (mm2/Amps)	4 (23)	4 (23)	4 (23)
Motor rated supply per pump (A)	11.5	11.5	11.5
FLC per pump (A)	12.7	12.7	12.7
Starting current (A)	76.2	76.2	76.2
Central control supply - single phase (mm2/Amps)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40
Cooling air flow per pump (m3/s)	0.3	0.3	0.3
Installation Proposal	4109990467	4109990467	4109990467
Part Number with vessel	4109000814	4109000821	4109000828
Part Number no vessel	n.a	n.a	n.a
Weight With Vessel (kg)	1050	1350	1590
Weight no vessel	n.a	n.a	n.a

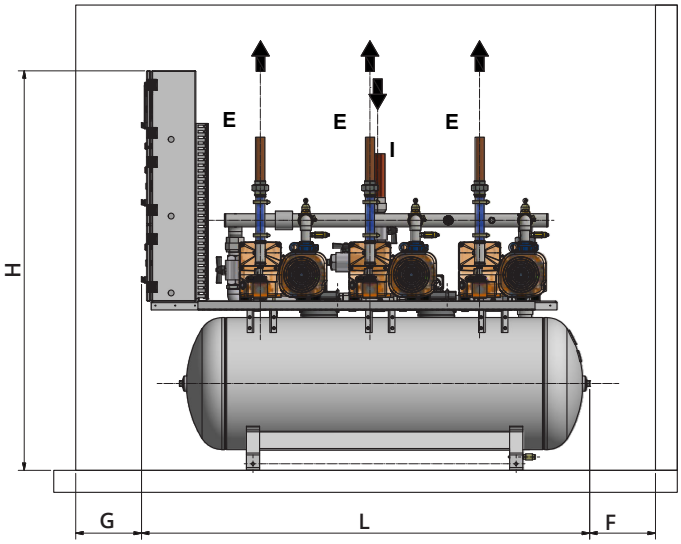
*- if equipped with vessel

- Plant Output in terms of free air aspired at a vacuum of -450 mmHg at the inlet connection with one pump on standby and with a tolerance of ±10%.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of ±10%.
- Plant dimensions include the required space around the plant for maintenance access.
- Mean sound level measured at a distance of 1m as measured to ISO 2151 / DIN 45635.
- Electrical details are provided for guidance only and are referenced at 40°C ambient temperature. Site conditions may impose a larger cable size. For exact cable sizing, and fuse / MCB ratings, consult a qualified electrical engineer.
- Plant weight includes packaging for shipping purposes.

Typical Layout Tank Mounted System







It is recommended to tranport the unit on the wooden transport bottom as near as possible to the installation site.

Lifting area, prefered transportation without wooden bottom

Lifting eyes for crane transportation

Use all available lifting eyes with equally divided load

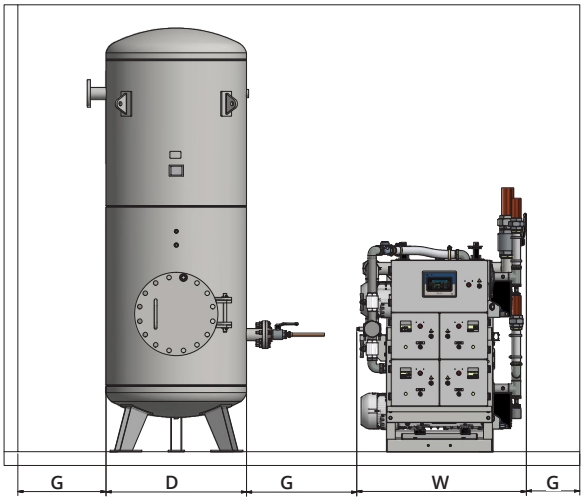
Tank mounted HTM02-01

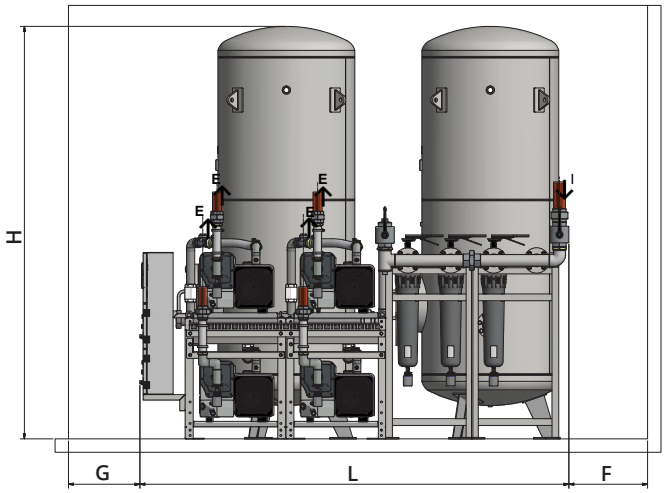
Model	mVAC360TTH-0201-65-WMED	mVAC500TTH-0201-100-WMED
Length (mm)	2044	2044
Width (mm)	1157	1157
Height (mm)	1822	1822
LMA	3644	3644
WMA	2157	2157
F	500	500
G	800	800
Inlet Ø	63	63
Exhaust Ø	42	42
Tank Volume	500	500

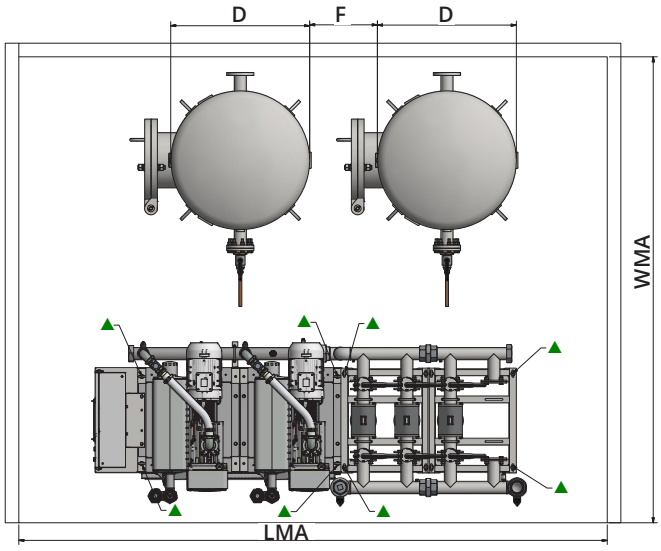
Tank mounted HTM2022

Model	mVAC270DTH-2022-40-WMED	mVAC500TTH-2022-40-WMED	mVAC730TTH-2022-65-WMED	mVAC1000TTH-2022-100-WMED
Length (mm)	2044	2044	2462	2462
Width (mm)	1157	1157	1426	1426
Height (mm)	1822	1822	2014	2014
LMA	3644	3644	4062	4062
WMA	2157	2157	2426	2426
F	500	500	500	500
G	800	800	800	800
Inlet Ø	63	63	63	63
Exhaust Ø	42	42	42	42
Tank Volume	500	500	1000	1000

Typical Layout Frame Mounted System







It is recommended to tranport the unit on the wooden transport bottom as near as possible to the installation site.

Lifting area, prefered transportation without wooden bottom

Lifting eyes for crane transportation

Use all available lifting eyes with equally divided load

Frame mounted HTM02-01

Model	mVAC270TMV-0201-40-WMED	mVAC360TMV-0201-65-WMED	mVAC500QMV-0201-40-WMED	mVAC730QMV-0201-65-WMED	mVAC1220QMV-0201-100-WMED
Length (mm)	1925	1925	1925	1925	2580
Width (mm)	955	955	955	955	1190
Height (mm)	2080	2080	2080	2080	2080
LMA	3225	3225	3225	3225	4070
WMA	3945	3945	3945	3945	4180
F	500	500	500	500	500
D Ø	590	590	590	590	590
G	800	800	800	800	800
Inlet Ø	67	67	67	67	88
Exhaust Ø	42	42	42	42	42
Vessel Con. Ø	67	67	67	67	67
Tank Value	1x500L	1x500L	1x500L	2x500L	3x500L

Frame mounted HTM02-01 Continued

Model	mVAC2250QMV-0201-200-WMED	mVAC3500QMV-0201-300-WMED	mVAC4500HMV-0201-200-WMED	mVAC5250PMV-0201-300-WMED	mVAC7000HMV-0201-300-WMED
Length (mm)	2010	2580	3960	3960	3960
Width (mm)	1190	1200	1200	1200	1200
Height (mm)	2820	3060	3060	3060	2800
LMA	3310	3880	5260	5300	5900
WMA	4490	4600	4800	4600	4800
F	500	500	500	500	500
D Ø	900	1000	1200	1000	1200
G	800	800	800	800	800
Inlet Ø	88	88	88	88	88
Exhaust Ø	67	67	67	67	67
Vessel Con. Ø	88	88	88	88	88
Tank Value	2x1500L	2x2000L	2x2500L	3x2000L	3x2500L

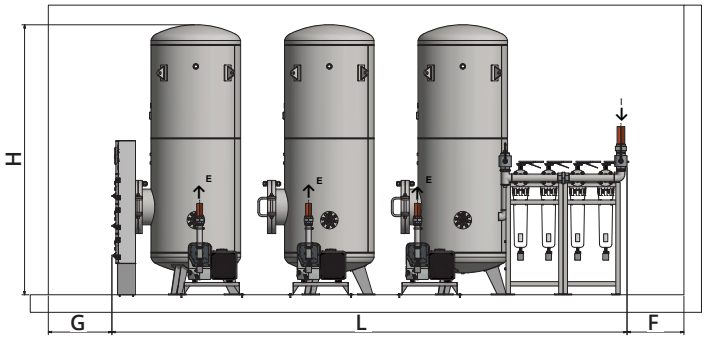
Frame mounted HTM2022

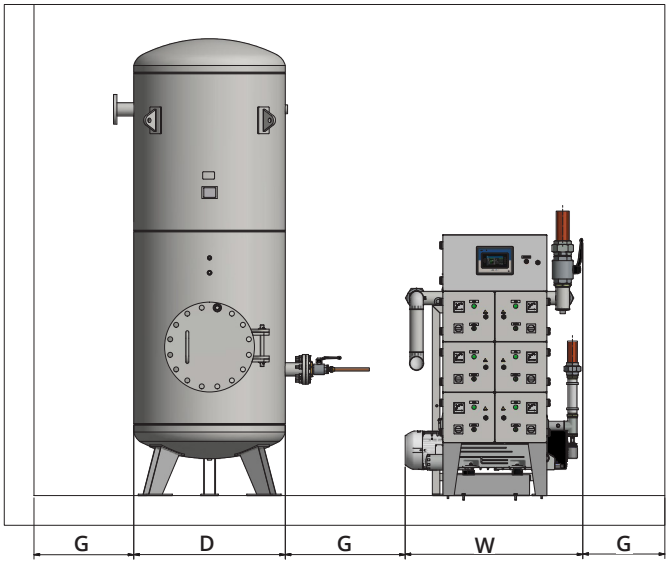
Model	mVAC1220TMV-2022-100-WMED	mVAC2250TMV-2022-200-WMED	mVAC3370QMV-2022-200-WMED	mVAC4500PMV-2022-200-WMED	mVAC5250QMV-2022-300-WMED
Length (mm)	2580	2010	2010	3960	2580
Width (mm)	1190	1190	1190	1200	1200
Height (mm)	2080	2820	2820	3060	3060
LMA	3880	3310	3800	5260	5300
WMA	4490	4790	4590	4800	4600
F	500	500	500	500	500
D Ø	900	1200	1000	1200	1000
G	800	800	800	800	800
Inlet Ø	88	88	88	88	88
Exhaust Ø	42	67	67	67	67
Vessel Con. Ø	88	88	88	88	88
Tank Value	1x1500L	1x2500L	2x2000L	2x2500L	3x2000L

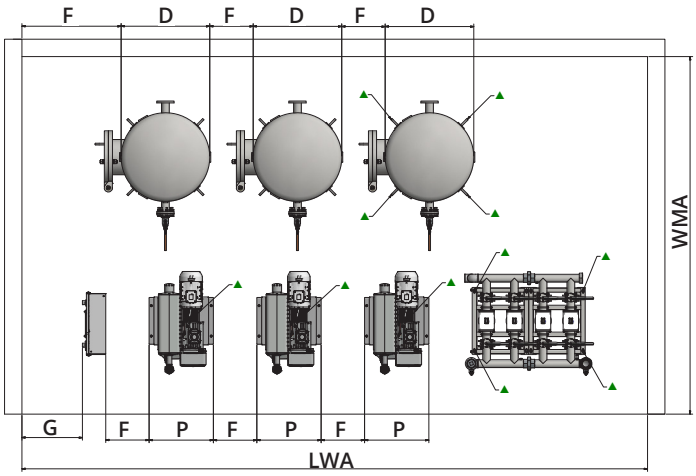
Frame mounted HTM2022 Continued

Model	mVAC7000PMV-2022-300-WMED	mVAC8000HMV-2022-300-WMED
Length (mm)	3960	4760
Width (mm)	1200	1200
Height (mm)	3060	2800
LMA	5300	5800
WMA	4800	4600
F	500	500
D Ø	1200	1000
G	800	800
Inlet Ø	88	88
Exhaust Ø	67	67
Vessel Con. Ø	88	88
Tank Value	3x2500L	4x2000L

Typical Layout Floor Mounted System







It is recommended to tranport the unit on the wooden transport bottom as near as possible to the installation site.

Lifting area, prefered transportation without wooden bottom

Lifting eyes for crane transportation

Use all available lifting eyes with equally divided load

Floor mounted HTM 02-01

Model	mVAC270TFV-0201-40-WMED	mVAC360TFV-0201-65-WMED	mVAC500QFV-0201-40-WMED	mVAC730QFV-0201- 65-WMED	mVAC1220QFV-0201-100-WMED
Length (mm)	4315	4315	5295	5295	7290
Width (mm)	955	955	955	955	1190
Height (mm)	2080	2080	2080	2080	2820
LMA	5615	5615	6595	6595	8590
WMA	3945	3945	3945	3945	4490
F	500	500	500	500	500
D Ø	590	590	590	590	590
G	800	800	800	800	800
Inlet Ø	67	67	67	67	88
Exhaust Ø	42	42	42	42	42
Vessel Con. Ø	67	67	67	67	67
Tank Value	1x500L	1x500L	1x500L	2x500L	3x500L

Floor mounted HTM 02-01 Continued

Model	mVAC2250QFV-0201-200-WMED	mVAC3500QFV-0201-300-WMED	mVAC4500HFV-0201-200-WMED	mVAC5250PFV-0201-300-WMED	mVAC7000HFV-0201-300-WMED
Length (mm)	7290	9040	6540	7290	9790
Width (mm)	1200	1200	1190	1200	1200
Height (mm)	3060	3060	2080	3060	2800
LMA	8590	10340	7840	8590	11090
WMA	4600	4800	4180	4600	4800
F	500	500	500	500	500
D Ø	900	1000	1200	1000	1200
G	800	800	800	800	800
Inlet Ø	88	88	88	88	88
Exhaust Ø	67	67	67	67	67
Vessel Con. Ø	88	88	88	88	88
Tank Value	2x1500L	2x2000L	2x2500L	3x2000L	3x2500L

Floor mounted HTM2022

Model	mVAC1220TFV-2022-100-WMED	mVAC2250TFV-2022-200-WMED	mVAC3370QFV-2022-200-WMED	mVAC4500PFV-2022-200-WMED	mVAC5250QFV-2022-300-WMED
Length (mm)	5290	6040	7290	8540	7290
Width (mm)	1190	1190	1190	1200	1200
Height (mm)	2080	2820	2820	3060	3060
LMA	6590	7340	8590	9840	8590
WMA	4490	4790	4590	4800	4600
F	500	500	500	500	500
D Ø	900	1200	1000	1200	1000
G	800	800	800	800	800
Inlet Ø	88	88	88	88	88
Exhaust Ø	42	67	67	67	67
Vessel Con. Ø	88	88	88	88	88
Tank Value	1x1500L	1x2500L	2x2000L	2x2500L	3x2000L

Floor mounted HTM2022 Continued

Model	mVAC7000PFV-2022-300-WMED	mVAC8000HFV-2022-300-WMED
Length (mm)	8540	10590
Width (mm)	1200	1200
Height (mm)	3060	2800
LMA	9840	11090
WMA	4800	4600
F	500	500
D Ø	1200	1000
G	800	800
Inlet Ø	88	88
Exhaust Ø	67	67
Vessel Con. Ø	88	88
Tank Value	3x2500L	4x2000L

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