

mVAC Medical Vacuum Supply System 380V 60Hz – 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.

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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	02-01	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	400/3/50
		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	mVAC330-TT	mVAC440-TT	mVAC500-TT	mVAC1000-TT
Model Description	mVAC330TTH 02-01 40 WMKD	mVAC440TTH 02-01 65 WMKD	mVAC500TTH 02-01 100 WMKD	mVAC1000TTH 02-01 220 WMKD
Plant Output (l/min)	330	440	500	1000
System Flow (m³/h)	53	70	80	160
System Flow (l/m)	880	1173	1333	2667
Pump Model	MVS40	MVS65	MVS100	MVS220
Number of pumps	3	3	3	3
Unit Pump Flow (m³/h)	53	71	117	220
Number of receivers	1	1	1	1
Receiver volume (litres)*	500	500	500	1000
Total receiver volume (litres)*	500	500	500	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	76
Maximum exhaust back pressure (mbar)	150	150	150	150
Noise level/pump (dBA)	60	64	64	73
Motor rating (kW)	1.5	1.8	3.5	5.5
Motor cable size (mm²)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	3	4	7.05	10.8
FLC per pump (A)	3.3	4.4	7.8	12.4
Starting current (A)	33	44	78	124
Central control supply cable size - 1Ph (mm²)	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	0.2	0.3	0.3
Installation Proposal	4109990119	4109990119	4109990119	4109990119
Part Number with vessel	4109000527	4109000539	4109000551	4109000501
Weight With Vessel (kg)	450	470	670	1000

- 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 $\pm 10\%$.
- System Flow at atmospheric pressure at the inlet connection with two pumps on standby and with a tolerance of $\pm 10\%$.
- 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 Tank Mounted

Model Name	mVAC330-DT	mVAC500-TT	mVAC880-TT	mVAC1000-TT
Model	mVAC330DTH-2022-40-WMKD	mVAC500TTH-2022-40-WMKD	mVAC880TTH-2022-65-WMKD	mVAC1000TTH-2022-100-WMKD
Plant Output (l/min)	330	500	880	1000
System Flow (m³/h)	53	80	141	160
System Flow (l/m)	880	1333	2347	2667
Pump Model	MVS40	MVS40	MVS65	MVS100
Unit Pump Flow (m³/h)	53	53	71	117
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)	60	60	64	64
Motor rating (kW)	1.5	1.5	1.8	3.5
Motor cable size (mm²/Amps)	2.5 (17)	2.5 (17)	2.5 (17)	2.5 (17)
Motor rated supply per pump (A)	3	3	4	7.05
FLC per pump (A)	3.3	3.3	4.4	7.8
Starting current (A)	19.8	19.8	26.4	46.8
Central control supply - single phase (mm²/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Central control supply protection rating (A)	5	5	5	5
Maximum Inlet Temperature (°C)	40	40	40	40
Cooling air flow per pump (m³/s)	0.1	0.1	0.2	0.3
Installation Proposal	4109990149	4109990119	4109990119	4109990119
Part Number with vessel	4109000687	4109000691	4109000695	4109000703
Weight With Vessel (kg)	400	450	470	670

- 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 $\pm 10\%$.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of $\pm 10\%$.
- 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 02-01 Frame Mounted

Model Name	mVAC330-TM	mVAC440-TM	mVAC660-QM	mVAC880-QM	mVAC1460-QM
Model Description	mVAC330TMV 02-01 40 WMKD	mVAC440TMV 02-01 65 WMKD	mVAC660QMV 02-01 40 WMKD	mVAC880QMV 02-01 65 WMKD	mVAC1460QMV 02-01 100 WMKD
Plant Output (l/min)	330	440	660	880	1460
System Flow (m³/h)	53	70	106	141	234
System Flow (l/m)	880	1173	1760	2347	3893
Pump Model	MVS40	MVS65	MVS40	MVS65	MVS100
Unit Pump Flow (m³/h)	53	71	53	71	117
Number of pumps	3	3	4	4	4
Number of receivers	1	1	2	2	3
Receiver volume (litres)	500	500	500	500	500
Total receiver volume (litres)	500	500	1000	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)	60	64	60	64	64
Motor rating (kW)	1.5	1.8	1.5	1.8	3.5
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)	3	4	3	4	7.08
FLC per pump (A)	3.3	4.4	3.3	4.4	7.8
Starting current (A)	33	44	33	44	78
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	0.2	0.1	0.2	0.3
Frame mounted Installation Proposal	4109990479	4109990479	4109990480	4109990480	4109990481
Part Number	4109000445	4109000444	4109000452	4109000451	4109000450
Weight (kg)	478	528	706	756	1800



HTM 02-01 Frame Mounted Continued

Model Name	mVAC3000-QM	mVAC4000-QM	mVAC6000-HM	mVAC6000-PM	mVAC8000-HM
Model Description	mVAC3000QMV 02-01 220 WMKD	mVAC4000QMV 02-01 300 WMKD	mVAC6000HVM 02-01 220 WMKD	mVAC6000PMV 02-01 300 WMKD	mVAC8000HVM 02-01 300 WMKD
Plant Output (l/min)	3000	4000	6000	6000	8000
System Flow (m³/h)	480	640	960	960	1280
System Flow (l/m)	8000	10667	16000	16000	21333
Pump Model	MVS220	MVS300	MVS220	MVS300	MVS300
Unit Pump Flow (m³/h)	220	340	220	340	340
Number of pumps	4	4	6	5	6
Number of receivers	2	2	3	3	4
Receiver volume (litres)	1500	2000	2000	2000	2000
Total receiver volume (litres)	3000	4000	6000	6000	8000
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)	73	76	73	76	76
Motor rating (kW)	5.5	6.6	5.5	6.6	6.6
Motor cable size (mm²/Amps)	4 (23)	4 (23)	4 (23)	4 (23)	4 (23)
Motor rated supply per pump (A)	10.8	12.6	10.8	12.6	12.6
FLC per pump (A)	12.4	13.9	12.4	13.9	13.9
Starting current (A)	124	139	124	139	139
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	0.4	0.3	0.4	0.4
Frame mounted Installation Proposal	4109990480	4109990480	4109990481	4109990481	4109990486
Part Number	4109005063	4109000448	4109005070	4109000455	4109000462
Weight (kg)	2650	3200	3900	3950	5000

- 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 $\pm 10\%$.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of $\pm 10\%$.
- 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 Frame Mounted

Model Name	mVAC330-DM	mVAC440-DM	mVAC660-TM	mVAC730-DM	mVAC880-TM
Model Description	mVAC330DMV 2022 40 WMKD	mVAC440DMV 2022 65 WMKD	mVAC660TMV 2022 40 WMKD	mVAC730DMV 2022 100 WMKD	mVAC880TMV 2022 65 WMKD
Plant Output (l/m)	330	440	660	730	880
System Flow (m³/h)	53	70	106	117	141
System Flow (l/m)	720	960	1333	1627	1947
Pump Model	MVS40	MVS65	MVS40	MVS100	MVS65
Unit Pump Flow (m³/h)	53	71	53	117	71
Number of pumps	2	2	3	2	3
Number of receivers	1	1	2	2	2
Receiver volume (litres)	500	500	500	500	500
Total receiver volume (litres)	500	500	1000	1000	1000
Receiver connection(s) (mm)	28	28	76	76	76
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)	60	64	60	64	64
Motor rating (kW)	1.5	1.8	1.5	3.5	1.8
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	4.55	3.7
FLC per pump (A)	3.3	4.4	3.3	7.8	4.4
Starting current (A)	19.8	26.4	19.8	46.8	26.4
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	0.2	0.1	0.3	0.1
Frame mounted Installation Proposal	4109990487	4109990487	4109990487	4109990487	4109990487
Part Number	4109000403	4109000402	4109000410	4109000401	4109000409
Weight (kg)	423	466	500	1500	528





HTM 2022 Frame Mounted Continued

Model Name	mVAC1460-TM	mVAC3000-TM	mVAC4000-QM	mVAC6000-PM	mVAC6370-QM	mVAC8500-PM
Model Description	mVAC1460TMV 2022 100 WMKD	mVAC3000TMV 2022 220 WMKD	mVAC4000QMV 2022 220 WMKD	mVAC6000PMV 2022 220 WMKD	mVAC6370QMV 2022 300 WMKD	mVAC8500PMV 2022 300 WMKD
Plant Output (l/m)	1460	3000	4000	6000	6370	8500
System Flow (m³/h)	234	480	640	960	1019	1360
System Flow (l/m)	3893	8000	10667	16000	16987	22667
Pump Model	MVS100	MVS220	MVS220	MVS220	MVS300	MVS300
Unit Pump Flow (m³/h)	117	220	220	220	340	340
Number of pumps	3	3	4	5	4	5
Number of receivers	1	2	2	3	4	5
Receiver volume (litres)	1500	1500	2000	2000	2000	2000
Total receiver volume (litres)	1500	3000	4000	6000	8000	10000
Receiver connection(s) (mm)	76	76	76	76	76	76
Inlet/service connection (mm)	76	76	76	76	76	76
Exhaust connection (mm, per pump)	42	76	76	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150	150	150
Noise level/pump (dBA)	64	73	73	73	76	76
Motor rating (kW)	3.5	5.5	5.5	5.5	6.3	6.3
Motor cable size (mm²/Amps)	2.5 (17)	4 (23)	4 (23)	4 (23)	4 (23)	4 (23)
Motor rated supply per pump (A)	7.05	10.8	10.8	10.8	12.3	12.3
FLC per pump (A)	7.8	12.4	12.4	12.4	12.6	12.6
Starting current (A)	46.8	74.4	74.4	74.4	75.6	75.6
Central control supply - single phase (mm²/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40	40	40
Cooling air flow per pump (m³/s)	0.3	0.3	0.3	0.3	0.4	0.4
Frame mounted Installation Proposal	4109990487	4109990487	4109990487	4109990487	4109990487	4109990487
Part Number	4109000408	4109005055	4109005060	4109005067	4109000413	4109000420
Weight (kg)	1600	2100	2650	3650	4450	5550

- 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 $\pm 10\%$.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of $\pm 10\%$.
- 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	mVAC330-TF	mVAC440-TF	mVAC660-QF	mVAC880-QF	mVAC1460-QF
Model Description	mVAC330TFV 02-01 40 WMKD	mVAC440TFV 02-01 65 WMKD	mVAC660QFV 02-01 40 WMKD	mVAC880QFV 02-01 65 WMKD	mVAC1460QFV 02-01 100 WMKD
Plant Output (litres/minute)	330	440	660	880	1460
System Flow (m³/h)	53	70	106	141	234
System Flow (l/m)	880	1173	1760	2347	3893
Pump Model	MVS40	MVS65	MVS40	MVS65	MVS100
Unit Pump Flow (m³/h)	53	71	53	71	117
Number of pumps	3	3	4	4	4
Number of receivers	1	1	2	2	3
Receiver volume (litres)	500	500	500	500	500
Total receiver volume (litres)	500	500	1000	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)	60	64	60	64	64
Motor rating (kW)	1.5	1.8	1.5	1.8	3.5
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)	3	4	3	4	7.08
FLC per pump (A)	3.3	4.4	3.3	4.4	7.8
Starting current (A)	33	44	33	44	78
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	0.2	0.1	0.2	0.3
Frame mounted Installation Proposal	4109990467	4109990467	4109990467	4109990467	4109990467
Part Number	4109000881	4109000880	4109000888	4109000887	4109000886
Weight (kg)	450	480	660	690	1700



HTM02-01 Floor Mounted Continued

Model Name	mVAC3000-QF	mVAC4000-QF	mVAC6000-PF	mVAC8000-HF
Model Description	mVAC3000QFV 02-01 220 WMKD	mVAC4000QFV 02-01 300 WMKD	mVAC6000PFV 02-01 300 WMKD	mVAC8000HFV 02-01 300 WMKD
Plant Output (litres/minute)	3000	4000	6000	8000
System Flow (m³/h)	480	640	960	1280
System Flow (l/m)	8000	10667	16000	21333
Pump Model	MVS220	MVS300	MVS300	MVS300
Unit Pump Flow (m³/h)	220	340	340	340
Number of pumps	4	4	5	6
Number of receivers	2	2	3	4
Receiver volume (litres)	1500	2000	2000	2000
Total receiver volume (litres)	3000	4000	6000	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)	73	76	76	76
Motor rating (kW)	5.5	6.6	6.6	6.6
Motor cable size (mm²/Amps)	4 (23)	4 (23)	4 (23)	4 (23)
Motor rated supply per pump (A)	10.8	12.6	12.6	12.6
FLC per pump (A)	12.4	13.9	13.9	13.9
Starting current (A)	124	139	139	139
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	0.4	0.4	0.4
Frame mounted Installation Proposal	4109990467	4109990467	4109990467	4109990467
Part Number	4109005080	4109000884	4109000891	4109000898
Weight (kg)	2580	3100	3880	4890

- 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 Floor Mounted

Model Name	mVAC330-DF	mVAC440-DF	mVAC660-TF	mVAC730-DF	mVAC880-TF
Model Description	mVAC330DFV 2022 40 WMKD	mVAC440DFV 2022 65 WMKD	mVAC660TFV 2022 40 WMKD	mVAC730DFV 2022 100 WMKD	mVAC880TFV 2022 65 WMKD
Plant Output (litres/minute)	330	440	660	730	880
System Flow (m³/h)	53	70	106	117	141
System Flow (l/m)	880	1173	1760	1947	2347
Pump Model	MVS40	MVS65	MVS40	MVS100	MVS65
Unit Pump Flow (m³/h)	53	71	53	117	71
Number of pumps	2	2	3	2	3
Number of receivers	1	1	2	2	2
Receiver volume (litres)	500	500	500	500	500
Total receiver volume (litres)	500	500	1000	1000	1000
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)	60	64	60	64	64
Motor rating (kW)	1.5	1.8	1.5	3.5	1.8
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	4.55	3.7
FLC per pump (A)	3.3	4.4	3.3	7.8	4.4
Starting current (A)	19.8	26.4	19.8	46.8	26.4
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	0.2	0.1	0.3	0.1
Installation Proposal	4109990467	4109990467	4109990467	4109990467	4109990467
Part Number	4109000839	4109000838	4109000846	4109000837	4109000845
Weight (kg)	400	445	480	1350	528





HTM2022 Floor Mounted Continued

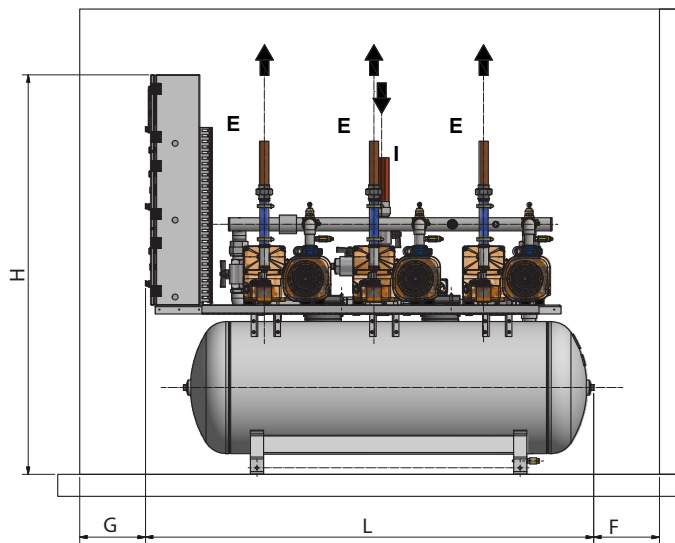
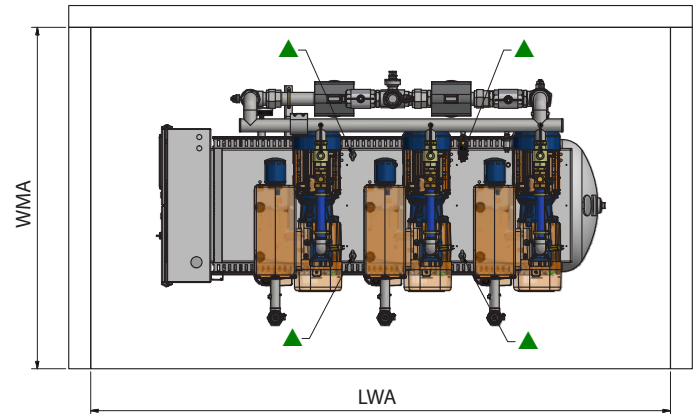
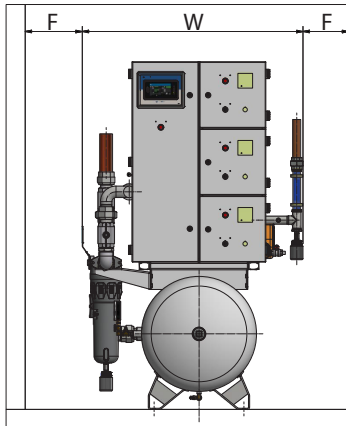
Model Name	mVAC1460-TF	mVAC3000-TF	mVAC4000-QF	mVAC6000-PF	mVAC6370-QF	mVAC8500-PF
Model Description	mVAC1460TFV 2022 100 WMKD	mVAC3000TFV 2022 220 WMKD	mVAC4000QFV 2022 220 WMKD	mVAC6000PFV 2022 220 WMKD	mVAC6370QFV 2022 300 WMKD	mVAC8500PFV 2022 300 WMKD
Plant Output (litres/minute)	1460	3000	4120	6000	6370	8500
System Flow (m³/h)	234	480	659	960	1019	1360
System Flow (l/m)	3893	8000	10987	16000	16987	22667
Pump Model	MVS100	MVS220	MVS220	MVS220	MVS300	MVS300
Unit Pump Flow (m³/h)	117	220	220	220	340	340
Number of pumps	3	3	4	5	4	5
Number of receivers	1	2	2	3	4	5
Receiver volume (litres)	1500	1500	2000	2000	2000	2000
Total receiver volume (litres)	1500	3000	4000	6000	8000	10000
Receiver connection(s) (mm)	76	76	76	76	76	76
Inlet/service connection (mm)	76	76	76	76	76	76
Exhaust connection (mm, per pump)	42	76	76	76	76	76
Maximum exhaust back pressure (mbar)	150	150	150	150	150	150
Noise level/pump (dBA)	64	73	73	73	76	76
Motor rating (kW)	3.5	5.5	5.5	5.5	6.3	6.3
Motor cable size (mm²/Amps)	2.5 (17)	4 (23)	4 (23)	4 (23)	4 (23)	4 (23)
Motor rated supply per pump (A)	7.05	10.4	10.8	10.8	12.3	12.3
FLC per pump (A)	7.8	12.4	12.4	12.4	12.6	12.6
Starting current (A)	46.8	74.4	74.4	74.4	75.6	75.6
Central control supply - single phase (mm²/Amps)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)	2.5 (5)
Maximum Inlet Temperature (°C)	40	40	40	40	40	40
Cooling air flow per pump (m³/s)	0.3	0.3	0.3	0.3	0.4	0.4
Installation Proposal	4109990467	4109990467	4109990467	4109990467	4109990467	4109990467
Part Number	4109000844	4109005077	4109005078	4109005079	4109000849	4109000856
Weight (kg)	1450	2000	2500	2500	4350	5350

- 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 $\pm 10\%$.
- System Flow at atmospheric pressure at the inlet connection with one pump on standby and with a tolerance of $\pm 10\%$.
- 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 transport the unit on the wooden transport bottom as near as possible to the installation site.



Lifting area, preferred transportation without wooden bottom



Lifting eyes for crane transportation

Use all available lifting eyes with equally divided load

Tank mounted HTM02-01

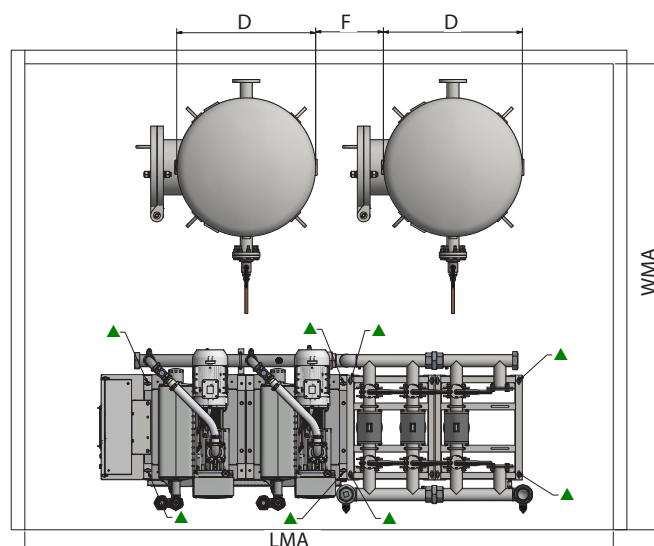
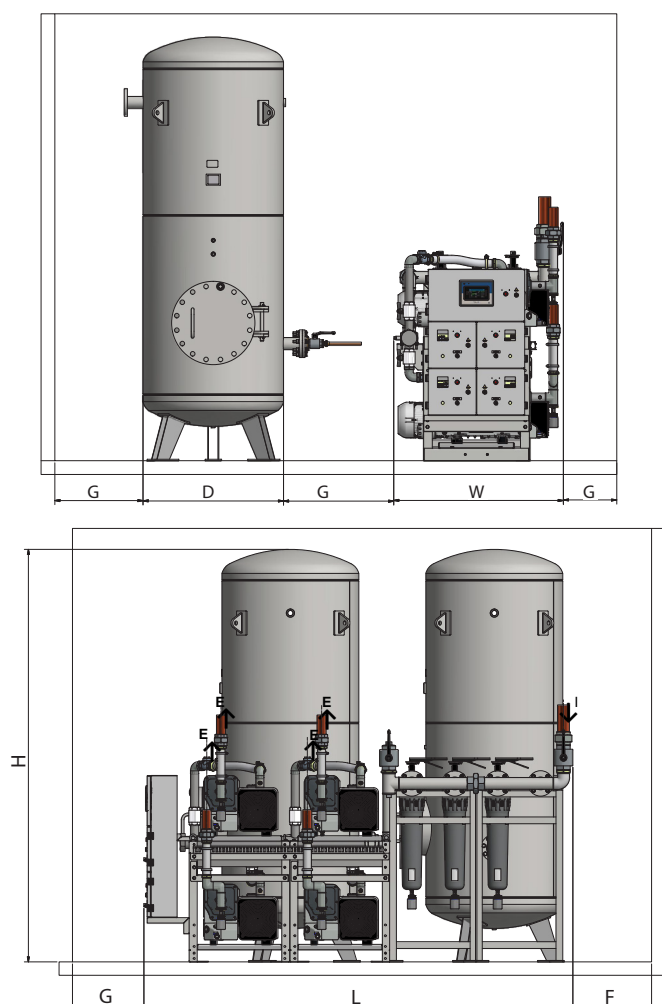
Model	mVAC330TTH-0201-40-WMKD	mVAC440TTH-0201-65-WMKD	mVAC500TTH-0201-100-WMKD
Length (mm)	2044	2044	2044
Width (mm)	1157	1157	1157
Height (mm)	1822	1822	1822
LMA	3644	3644	3644
WMA	2157	2157	2157
F	500	500	500
G	800	800	800
Inlet Ø	63	63	63
Exhaust Ø	42	42	42
Tank Volume	500	500	500



Tank mounted HTM2022

Model	mVAC330DTH-2022-40-WMKD	mVAC500TTH-2022-40-WMKD	mVAC880TTH-2022-65-WMKD	mVAC1000TTH-2022-100-WMKD
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 transport the unit on the wooden transport bottom as near as possible to the installation site.



Lifting area, preferred transportation without wooden bottom



Lifting eyes for crane transportation

Use all available lifting eyes with equally divided load



Frame mounted HTM02-01

Model	mVAC330TMV-0201-40-WMKD	mVAC440TMV-0201-65-WMKD	mVAC660QMV-0201-40-WMKD	mVAC880QMV-0201-65-WMKD	mVAC1460QMV-0201-100-WMKD
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	5300
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	2x500L	2x500L	3x500L

Frame mounted HTM02-01 Continued

Model	mVAC2750QMV-0201-200-WMKD	mVAC4000QMV-0201-300-WMKD	mVAC5500HMV-0201-200-WMKD	mVAC6000PMV-0201-300-WMKD	mVAC8000HMV-0201-300-WMKD
Length (mm)	2580	3960	2580	3960	4760
Width (mm)	1200	1200	1190	1200	1200
Height (mm)	3060	3060	2080	3060	2800
LMA	3880	5260	5300	5300	6800
WMA	4600	4800	4180	4600	4800
F	500	500	500	500	500
D Ø	900	1000	1000	1000	1000
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	3x2000L	3x2000L	4x2000L

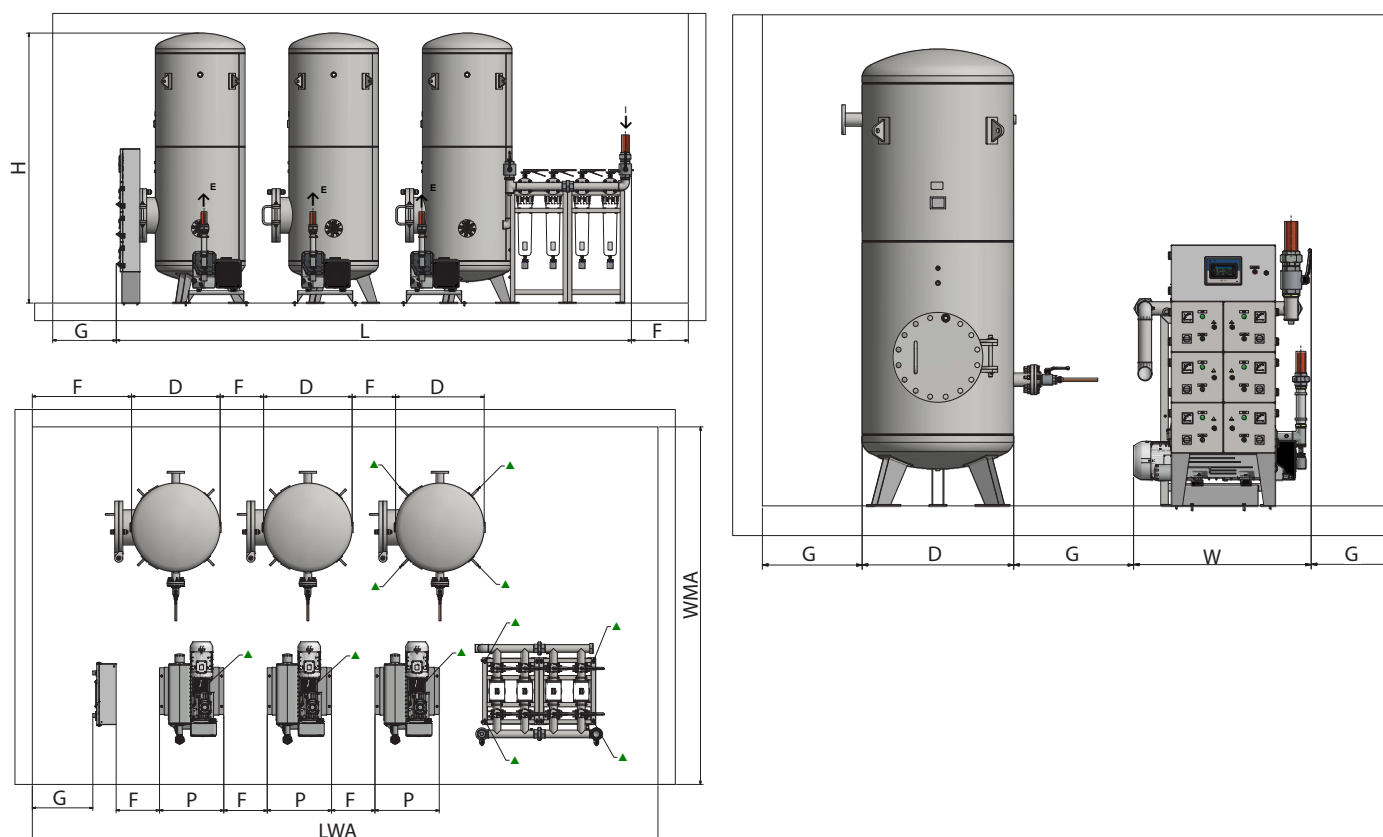




Frame mounted HTM2022

Model	mVAC1460TMV-2022-100-WMKD	mVAC2750TMV-2022-200-WMKD	mVAC4000QMV-2022-200-WMKD	mVAC5500PMV-2022-200-WMKD	mVAC6370QMV-2022-300-WMKD	mVAC8500PMV-2022-300-WMKD
Length (mm)	2580	2010	2010	3960	2580	4760
Width (mm)	1190	1190	1190	1200	1200	1200
Height (mm)	2080	2820	2820	3060	3060	3060
LMA	3880	3600	3800	5300	6800	6800
WMA	4490	4490	4590	4600	4600	4600
F	500	500	500	500	500	500
D Ø	900	900	1000	1000	1000	1000
G	800	800	800	800	800	800
Inlet Ø	88	88	88	88	88	88
Exhaust Ø	42	67	67	67	67	67
Vessel Con. Ø	88	88	88	88	88	88
Tank Value	1x1500L	2x1500L	2x2000L	3x2000L	4x2000L	5x2000L

Typical Layout Floor Mounted System



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



Lifting area, preferred transportation without wooden bottom



Lifting eyes for crane transportation

Use all available lifting eyes with equally divided load





Floor mounted HTM02-01

Model	mVAC330TFV-0201-40-WMKD	mVAC440TFV-0201-65-WMKD	mVAC660QFV-0201-40-WMKD	mVAC880QFV-0201-65-WMKD	mVAC1460QFV-0201-100-WMKD
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	2x500L	2x500L	3x500L

Floor mounted HTM02-01 Continued

Model	mVAC2750QFV-0201-200-WMKD	mVAC4000QFV-0201-300-WMKD	mVAC5500HFV-0201-200-WMKD	mVAC6000PFV-0201-300-WMKD	mVAC8000HFV-0201-300-WMKD
Length (mm)	7290	6540	9040	7290	10590
Width (mm)	1200	1200	1190	1200	1200
Height (mm)	3060	3060	2080	3060	2800
LMA	8590	7840	10340	8590	11090
WMA	4600	4800	4180	4600	4800
F	500	500	500	500	500
D Ø	900	1000	1000	1000	1000
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	3x2000L	3x2000L	4x2000L





Floor mounted HTM2022

Model	mVAC1460TFV-2022-100-WMKD	mVAC2750TFV-2022-200-WMKD	mVAC4000QFV-2022-200-WMKD	mVAC5500PFV-2022-200-WMKD	mVAC6370QFV-2022-300-WMKD	mVAC8500PFV-2022-300-WMKD
Length (mm)	5290	6040	7290	8540	7290	9340
Width (mm)	1190	1190	1190	1200	1200	1200
Height (mm)	2080	2820	2820	3060	3060	3060
LMA	6590	7340	8590	9840	8590	9840
WMA	4490	4490	4590	4600	4600	4600
F	500	500	500	500	500	500
D Ø	900	900	1000	1000	1000	1000
G	800	800	800	800	800	800
Inlet Ø	88	88	88	88	88	88
Exhaust Ø	42	67	67	67	67	67
Vessel Con. Ø	88	88	88	88	88	88
Tank Value	1x1500L	2x1500L	2x2000L	3x2000L	4x2000L	5x2000L

