

### Electromagnetic Emissions

The Medela Suction Pumps are intended for use in the electromagnetic environment specified below. The customer or the user of the Medela Suction Pumps should assure that they are used in such environment.

Emission Tests	Compliance	Electromagnetic environment - guidance
RF emissions CISPR 11	Group 1	The Medela Suction Pumps use RF energy only for their internal function. Therefore, its RF emissions are very low and are not likely to cause any interference with nearby electronic equipment.
RF emissions CISPR 11	Class B	The Medela Suction Pumps are suitable for use in all establishments, including domestic establishments and those directly connected to the public low-voltage power supply network that supplies buildings used for domestic purposes.
Harmonic emissions IEC 61000-3-2	Class A	
Voltage fluctuations / flicker emissions IEC 60000-3-3	Complies	

Warning – The Medela Suction Pumps should not be used adjacent to or stacked with other equipment. If adjacent or stacked use is necessary, the Medela Suction Pumps should be observed to verify normal operation in the configuration in which it will be used.

## Technical Documentation (Con't)

IEC 60601-1-2, Table 202

### Electromagnetic Immunity

The Medela Suction Pumps are intended for use in the electromagnetic environment specified below. The customer or the user of the Medela Suction Pumps should assure that they are used in such environment.


Immunity Tests	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Electrostatic Discharge (ESD) IEC 61000-4-2	$\pm 6$ kV contact $\pm 8$ kV air	$\pm 6$ kV contact $\pm 8$ kV air	Floors should be wood, concrete or ceramic tile. If floors are covered with synthetic material, the relative humidity should be at least 30 %.
Electrical fast transient/burst IEC 61000-4-4	$\pm 2$ kV for power supply lines $\pm 1$ kV for input / output lines	$\pm 2$ kV for power supply lines $\pm 1$ kV for input / output lines	Mains power quality should be that of a typical commercial or hospital environment.
Surge IEC 61000-4-5	$\pm 1$ kV differential mode $\pm 2$ kV common mode	$\pm 1$ kV differential mode $\pm 2$ kV common mode	Mains power quality should be that of a typical commercial or hospital environment.
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	<5 % UT (>95 % dip in UT) for 0.5 cycle  40 % UT (60 % dip in UT) for 5 cycles  70 % UT (30 % dip in UT) for 25 cycles  <5 % UT (>95 % dip in UT) for 5 sec	<5 % UT (>95 % dip in UT) for 0.5 cycle  40 % UT (60 % dip in UT) for 5 cycles  70 % UT (30 % dip in UT) for 25 cycles  <5 % UT (>95 % dip in UT) for 5 sec	Mains power quality should be that of a typical commercial or hospital environment. If the user of the Medela Suction Pumps requires continued operation during power mains interruptions, it is recommended that the Medela Suction Pumps be powered from an uninterruptible power supply or a battery.
Power frequency (50/60 Hz) magnetic field IEC 61000-4-8	3 A/m	3 A/m	Power frequency magnetic fields should be at levels of a typical commercial or hospital environment.

## Technical Documentation (Con't)

IEC 60601-1-2, Table 204

### Electromagnetic Immunity

The Medela Suction Pumps are intended for use in the electromagnetic environment specified below. The customer or the user of the Medela Suction Pumps should assure that they are used in such environment.

Immunity Tests	IEC 60601 test level	Compliance level	Electromagnetic environment - guidance
Conducted RF IEC 61000-4-6	3 Vrms 150 kHz to 80 MHz	3 Vrms	Portable and mobile RF communications equipment should be used no closer to any part of the Medela Suction Pumps, including cables, than the recommended separation distance calculated from the equation applicable to the frequency of the transmitter.  Recommended separation distance $d = 1.2 \sqrt{P}$ $d = 1.2 \sqrt{P}$ 80 MHz to 800 MHz $d = 2.3 \sqrt{P}$ 800 MHz to 2.5 GHz  where P is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer and d is the recommended separation distance in meters (m)  Field strengths from fixed RF transmitters, as determined by an electromagnetic site survey, should be less than the compliance level in each frequency range. <sup>a</sup>  Interference may occur in the vicinity of equipment marked with the following symbol:  
Radiated RF IEC 61000-4	3 V/m 80 MHz to 2.5 GHz	3 V/m	

NOTE 1 At 80 MHz and 800 MHz, the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

<sup>a</sup> Field strengths from fixed RF transmitters, such as base stations for radio (cellular/cordless) telephones and land mobile radios, amateur radio, AM and FM radio broadcast and TV broadcast cannot be predicted theoretically with accuracy. To assess the electromagnetic environment due to fixed RF transmitters, an electromagnetic site survey should be considered. If the measured field strength in the location in which the Medela Suction Pumps are used exceeds the applicable RF compliance level above, the Medela Suction Pumps should be observed to verify normal operation. If abnormal operation is observed, additional measures may be necessary, such as reorienting or relocating the Medela Suction Pumps.

<sup>b</sup> Over the frequency range 150 kHz to 80 MHz, field strengths should be less than 3 V/m.

## Technical Documentation (Con't)

IEC 60601-1-2, Table 206

### Recommended separation distance between portable and mobile RF communications equipment and the Medela Suction Pumps

The Medela Suction Pumps are intended for use in an electromagnetic environment in which radiated RF disturbances are controlled. The customer or the user of the Medela Suction Pumps can help prevent electromagnetic interference by maintaining a minimum distance between portable and mobile RF communications equipment (transmitters) and the Medela Suction Pumps as recommended below, according to the maximum output power of the communications equipment.

Rated maximum output power of transmitter	Separation distance according to frequency of transmitter		
	150 kHz to 80 MHz	80 MHz to 800 MHz	800 MHz to 2.5 GHz
W	$d = 1.2 \sqrt{P}$	$d = 1.2 \sqrt{P}$	$d = 2.3 \sqrt{P}$
0.01	0.12	0.12	0.23
0.1	0.38	0.38	0.73
1	1.2	1.2	2.3
10	3.8	3.8	7.3
100	12	12	23

For transmitters rated at a maximum output power not listed above, the recommended separation distance  $d$  in meters (m) can be estimated using the equation applicable to the frequency of the transmitter, where  $P$  is the maximum output power rating of the transmitter in watts (W) according to the transmitter manufacturer.

NOTE 1 At 80 MHz and 800 MHz, the separation distance for the higher frequency range applies.

NOTE 2 These guidelines may not apply in all situations. Electromagnetic propagation is affected by absorption and reflection from structures, objects and people.

**Technical specifications • Technische Daten • Données techniques • Specifiche tecniche • Technische specificaties • Tekniska specifikationer • Tekniske spesifikationer • Especificaciones técnicas • Especificações técnicas • Specyfikacja techniczna**



**low vacuum**  
- 10 kPa  
- 75 mmHg  
- 100 mbar/cm H<sub>2</sub>O



95 x 170 x 235 mm  
3.74 x 6.69 x 9.25 inch



**low flow**  
5 l/min.



**- 42,5 dB(A) 1 l - 2,5 kPa**  
Max. noise level  
Max. Lautstärke  
Niveau de bruit max.  
Livello di rumore max.  
Max. geluidsniveau  
Max. ljudnivå  
Max. støjniveau  
Nível de ruído máx.  
Nível de ruído máximo  
Maks. poziom głośności



**1 kg / 2,2 lbs**  
Without jar  
Ohne Behälter  
Sans récipient  
senza contenitore  
Zonder opvangpot

Utan behållare  
Uden beholder  
Sin recipiente  
sem recipiente  
Bez pojemnika



**78 dB(A)**  
Alarm noise level  
Alarm Lautstärke  
Alarme de niveau de bruit  
Livello di rumore allarme  
Geluidsniveau alarm  
Larm ljudnivå  
Alarmes støjniveau  
Nível de ruído de la alarma  
Nível de ruído de ruído  
Poziom głośności alarmu



**IP33**



ISO 9001  
ISO 13485  
CE (93/42/EEC), IIa



Operation  
Betrieb  
Fonctionnement  
Funcionamiento  
Gebruik

Drift  
Drift  
Funcionamiento  
Funcionamiento  
Działanie



Operation  
Betrieb  
Fonctionnement  
Funcionamiento  
Gebruik

Drift  
Drift  
Funcionamiento  
Funcionamiento  
Działanie



Operation  
Betrieb  
Fonctionnement  
Funcionamiento  
Gebruik

Drift  
Drift  
Funcionamiento  
Funcionamiento  
Działanie



Transport/Storage  
Transport/Lagerung  
Transport/Stockage  
Transporto/conservazione  
Transport/Opslag

Transport/förvaring  
Transport/Opbevaring  
Transport/Almacenamiento  
Transporte/Armaz enamento  
Transport / Przechowywanie



Transport/Storage  
Transport/Lagerung  
Transport/Stockage  
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Transport/förvaring  
Transport/Opbevaring  
Transporte/Almacenamiento  
Transporte/Armazenamiento  
Transport / Przechowywanie



20 W  
12 VDC



Switching adapter AC  
Netzgerät AC Adapter  
Adaptateur secteur  
Adattatore di rete CA  
AC adapter

Omkopplingsadapter AC  
Netadapter AC  
Adaptador de red CA  
Switching adapter AC  
Przelączanie adaptera AC

Model: TR30RAM120  
IEC: 60601-1  
Input: 100-240V~, 0.8-0.4A, 47-63Hz  
Output: 12V~, 2.5A