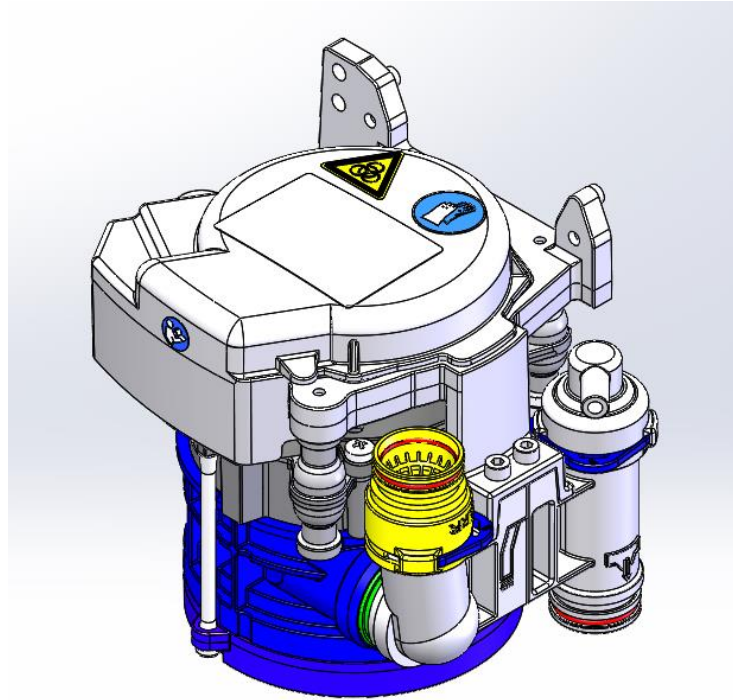


Data Sheet CS 1



1 General description

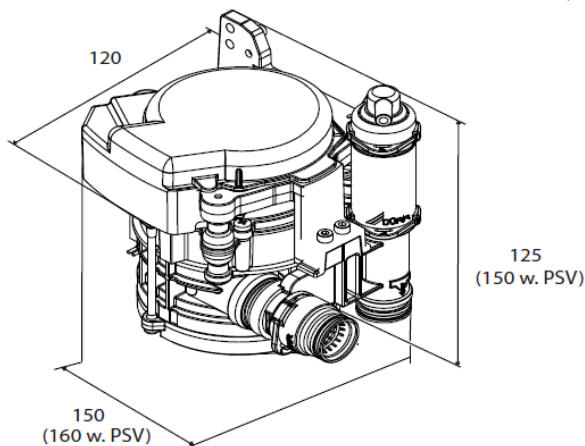
1.1 Function description

The task of the CS1 Combi-Sepamatic is to separate air and water in a dental treatment unit. The two-stage separation effectively prevents blood foam from being carried along during aspiration, thus protecting the dry suction unit connected at the back. The CS 1 Combi-Sepamatic can be operated in continuous operation. The permissible volume of supply water amounts to min. 0.1l/min, but must not exceed 2.0l/min. The CS 1 Combi-Sepamatic is unable to separate amalgam. The treatment of waste water containing amalgam requires the connection of an amalgam separator to the CS 1 Combi-Sepamatic.

2 Installation Guidelines

2.1 Dimensions

All distances in mm.



2.2 Mounting

See technical drawing in appendix.

2.3 Integration Guidelines

In order for the dampers to absorb the vibrations properly a gap of at least 3 to 5 mm around the CS 1 is necessary.

2.4 Installation/setup room

Directly in the treatment unit or in a special housing in an extension of the treatment unit.

2.5 Hose materials

For waste connections and suction lines only use the following hose types:

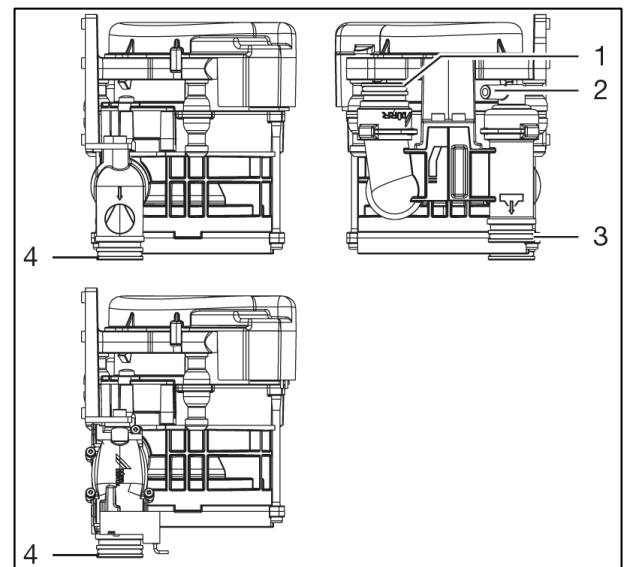
- Flexible spiral hoses made of PVC with integrated spiral or equivalent hoses
- Hoses that are resistant to dental disinfectants and chemicals

The following types of hoses must not be used:

- Rubber hoses
- Completely PVC hoses
- Hoses that are not sufficiently flexible

2.6 Recommendation

2.6.1 Diameter for pipes



1 Hose manifold	≥ Ø 25 mm
2 Vent	= Ø 6 mm
3 Outlet	≥ Ø 15 mm
4 Suction unit	≥ Ø 25 mm

The mesh size of the protective sieve in the connections (1) is 2,5 mm.

2.6.2 Rinsing

It is recommended that the suction system is equipped with a rinsing unit, e.g. in the treatment unit. The rinsing unit provides a small amount of water during aspiration. This dilutes the aspirated fluids (blood, saliva, rinsing water, etc.), which can then be transported more effectively. For further information, refer to the rinsing unit installation and operating instructions.

For surgical treatments and when the Airflow is being used, the CS 1 Combi-Sepamatic requires a rinsing unit to be installed, which feeds a small amount of water to the device during aspiration. This thins any liquid (e.g. saliva, blood) that occurs so it can be transported more easily.

3 Technical Data

Electrical data

Nominal voltage	V	24 V AC	24 V DC	36 V DC
Mains frequency	Hz	50-60	-	-
Rated power	VA	70		
Stand-By current	mA	80	40	40
Signal input from the hose manifold	V	24 V AC, 24 V DC ... 36 V DC		
Signal output	V	24 V DC		
	mA	300	300	300

Media

Volume of aspiration fluid min.	l/min	≥ 0,1
Volume of aspiration fluid max.	l/min	≤ 2,0
Air flow volume	l/min	≤ 350
Air flow rate	-	high
The suction system must be suitable for a high flow rate in accordance with EN ISO 10637.		
Max. pressure	hPa/mbar	-160

General data

Drive motor nominal speed	min ⁻¹	2800
Operating mode	%	100 (S1) DC*
Type of protection	-	IP 20
Protection class	-	II

Noise level ** approx.	dB(A)	45
Dimensions (height x width x depth)	mm	150 x 160 x 120
weight, approx.	kg	1,4
medical device (class)	-	I

* DC = duty cycle

** Noise levels in acc. with DIN EN ISO 3746 "airborne noise emissions"; measured in a sound-proofed room. The levels are average values with a tolerance of ± 1.5 dB(A). Higher values may be obtained in rooms with reverberating sound characteristics.

Operating conditions

Operating conditions	current [A]		
	24 V AC	24 V DC	36 V DC
Stand-By condition	0,08	0,04	0,04
Start behavior (Anlauf), max. 1s	3,2	2,7	2
Open loop (Leerlauf)	0,65	0,45	0,26
rated operation	2	1,4	0,9
Maximum current (drain blocked), max. 30s until warning and Motor stop	3,5	2,5	1,8
Inrush current max.	20	3	3

Ambient conditions during storage and transport

	Unit	Min.	Max.
Temperature	°C	-10	60
Relative humidity	%		< 95

Ambient conditions during operation

	Unit	Min.	Max.
Temperature	°C	10	40
Relative humidity	%		< 70

3.1 Electrical connection

Transformer ^{a)}	-	24 V AC, min. 100 VA
Cable cross-section	Unit feed	mm ² 0,75 ... 1,5
	Connection external valves	mm ² 0,5
Secondary Fuse	-	IEC 60127-2/V T 4 AH, 250 V

a) We recommend to use a safety transformer with 2 MOPP

3.2 Electrical connection diagram

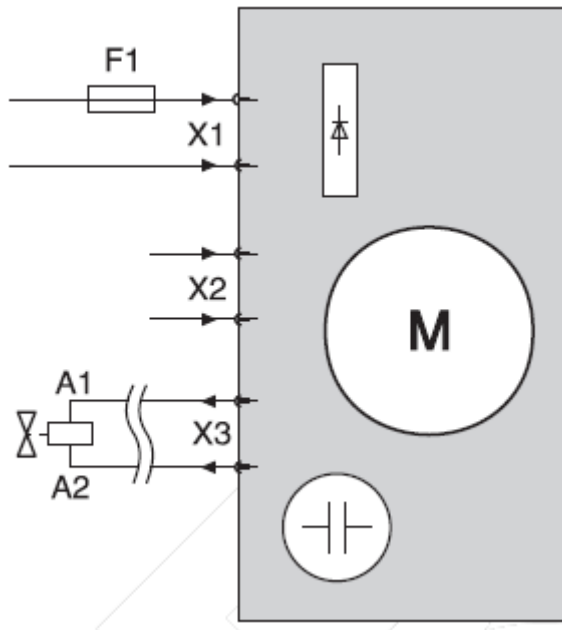


Abbildung 1: Wiring diagram CS 1

4 Disinfection and cleaning

NOTICE

Device malfunctions or damage due to use of incorrect media
Guarantee claims may become invalid as a result.

- Do not use any foaming agents, e.g. household cleaning agents or instrument disinfection agents.
- Do not use abrasive cleaners.
- Do not use agents containing chlorine.
- Do not use any solvents like acetone.

Approved for Orotol Plus and MD555.

Port	Type	Description
X1	PT09402HRBN (RIA)	Power supply in accordance with EN 60601-1, 24 V AC, 24-36 V DC
X2	PR04402HBBN (RIA)	Signal input 24 V AC, 24-36 V DC
X3	PT09402HHBN (RIA)	Rinsing unit or place selection valve / safety valve 24 VDC RMS
F1	-	IEC 60127-2/V T 4 AH, 250 V

5 Appendix

Hole pattern for CAS 1 and CS 1

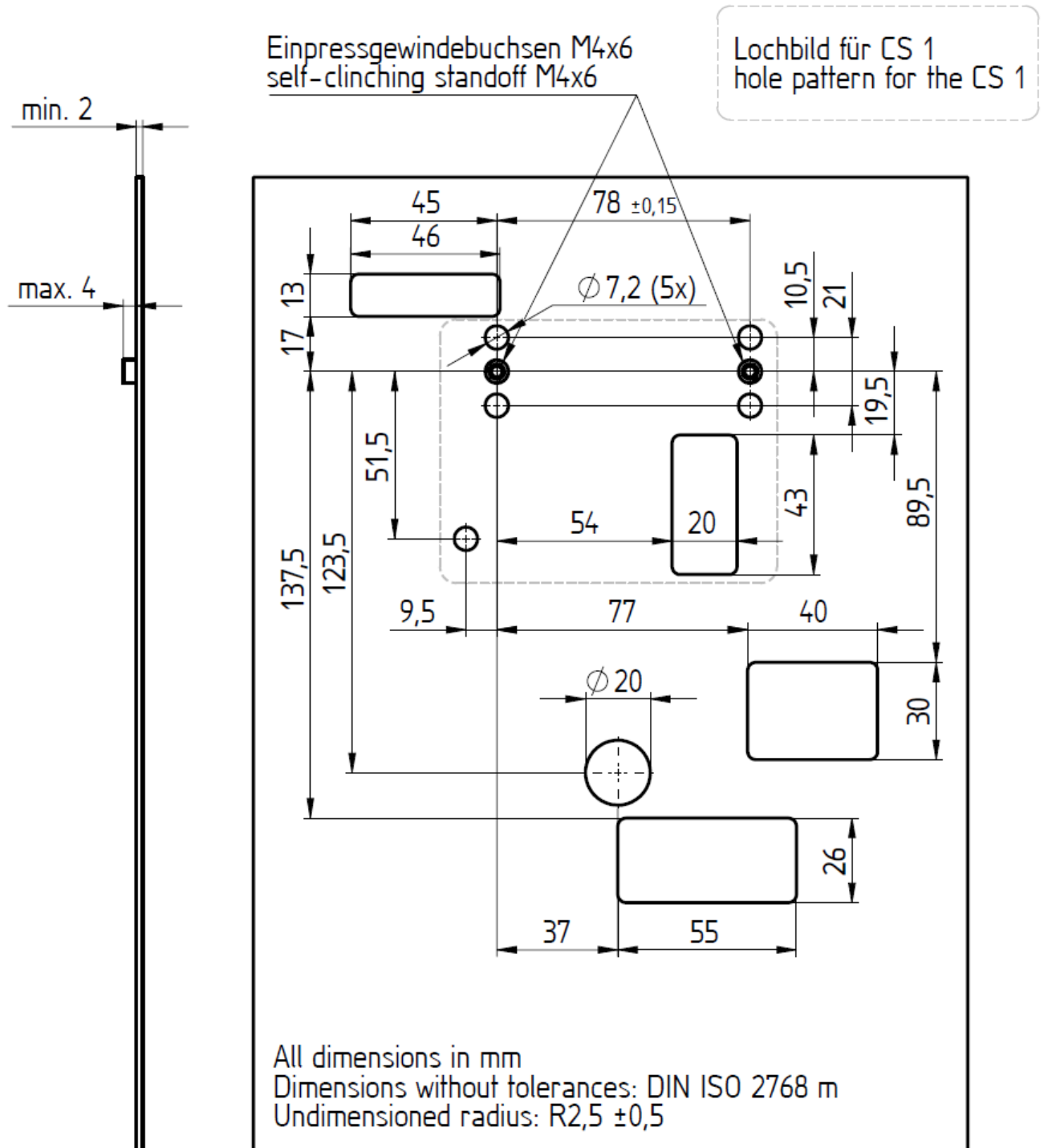


Figure 1: Hole pattern for CAS 1 and CS 1