NETZSCH

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Installation Notes

DSC 214 - Polyma

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DOCUMENTATION

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Installation Notes
DSC 214 - Polyma

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Content

Placement Requirements

When considering the best placement for your instrument, select:

- Rooms with low traffic and little vibration
- Rooms that are as dust-free as possible
- Rooms with the most constant temperature conditions possible (room temperature)
- Sturdy lab tables, concrete bases or stable wall brackets. (When using weighting tables with air or rubber damping, please ensure that the damping behavior is appropriate for the instrument.)

Avoid:

- Direct sunlight to the instrument
- Drafts from windows, doors and air conditioning
- Placement in rooms with cast plaster or wooden flooring
- Installation in the direct vicinity of transfer stations or systems with strong magnetic stay fields
- Setting up thermoanalytical instruments near doors or walls bordering a hallway or an elevator

Packaging

- If possible, keep the original packaging in which your instrument was delivered. Should repairs become necessary or should you wish to add additional equipment to your instrumentation, you can reuse the packaging to ensure damage-free return transport. Our environment will thank you as well.
- After unpacking, please check all delivered components for possible transport damage, using the supplied delivery note as a checklist for the individual items.
- Should an item be missing, please contact us immediately.

NOTE!

Important notes for sending goods:

⇨ NETZSCH cannot accept any liability whatsoever for damage caused by improper packaging. To avoid damage during transport, always ship components in their original packaging and suitable secondary packaging!

⇨ If the original packaging or the secondary packaging is damaged or no longer available, packages can be purchased from NETZSCH to ensure a safe transport of your goods.

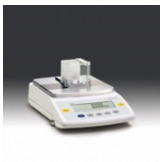
Dimensions, Weights and Maximum Power Consumptions

No.	Component	dimensions (width / depth / height)	weight	max. power consumption	Connection voltage
1	DSC 214 Polyma (w/o ASC or with ASC) w/o ASC: DSC21400A11.000-00 DSC21400A12.000-00 ASC-Add-On: ASC21400A00.000-00	350 / 560 / 280 mm with ASC: 350 / 560 / 445 mm	23 kg with ASC: 27 kg	600 VA	115 VAC / 230 VAC 50/60 Hz
2	Computersystem / Monitor (universally valid)	520 / 380 / 590 mm	7.6 / 5 kg	800 VA	115 / 230 V
3	Printer (universally valid)	410 / 470 / 295 mm	18.9 kg		115 / 230 V
4	CC 200 F3 dewar head with vessel 6.351.35-00.0.00	Ø 555, height: 1225 mm	CC200 F3: 4 kg vessel: 46 kg (empty) 98 kg (full)	-	connected to measuring part (LN2 cooling)
5	Intracooler (Julabo IC 40) NGB805287 NGB805286	200 / 360 / 430 mm	24 kg	644 VA (inrush current 7-8 A) 633 VA (inrush current 14-16A)	230 V / 50 Hz 115 V / 60 Hz
6	CC 300 dewar head with vessel 0CC30060B10.000-00 0CC30060B15.000-00	Ø 555, height: 1225 mm	CC300: 14 kg vessel: 46 kg (empty) 98 kg (full)	550 VA	115 V / 230 V

No.	Component	dimensions (width / depth / height)	weight	max. power consumption	Connection voltage
(7)	Intracooler (Julabo IC 70) NGB806297 NGB806298	380 / 550 / 600 mm	50 kg	920 VA (inrush current 10-12 A) 805 VA (inrush current 15-16A)	230 V / 50-60 Hz 115 V / 60 Hz
(8)	Linear small compressor (HiBlow HP80) 6.351.21-00.0.00 6.351.28-00.0.00	256 / 200 / 222 mm	7 kg	71 W	connected to measuring part
(9)	Gas flow meter (one-way / three way) three way: 6.240.20-40.0.00	Ø 100, height 250 mm	one way: 0.5 kg three way: 0,75 kg	-	-
(10)	Compressed air cooling device (Vortex) 6.351.31-00.0.00 6.351.32-00.0.00	additional length (overhang): 210 mm	0.5 kg	-	connected to measuring part or to Valve Control Box
(11)	Pressurized Air Cooling (magnetic valve) 6.351.22-10.0.00 6.351.22-11.0.00	100 / 60 / 30 mm	0.3 kg	-	connected to measuring part or to Valve Control Box

Additional Components

Technical data of additional components which are not included in the general 3D Installation Notes are listed in the table below.

Picture	Component	dimensions (width / depth / height)	weight	max. power consumption	Connection voltage
	external balance - Sartorius Cubis MSE 3.6P 6.220.10-99.1.00	balance: 249 / 404 / 373 mm electronics: 240 / 312 / 56 mm	-	7 W	100 - 240 V 50/60 Hz
	external balance - Sartorius Cubis MSE 125P 6.220.10-99.2.00	balance: 132 / 340 / 121 mm electronics: 240 / 211 / 56 mm	-	7 W	100 - 240 V 50/60 Hz

Installation Schematic

NOTICE!

Further technical data of successional examples is listed in table “Dimensions, Weights and Maximum Power Consumptions”, see page 3.

For each below listed example a connection advice example for supply network of 230V AC and appropriate fuses is included.

Hints for presented Installation Schematics

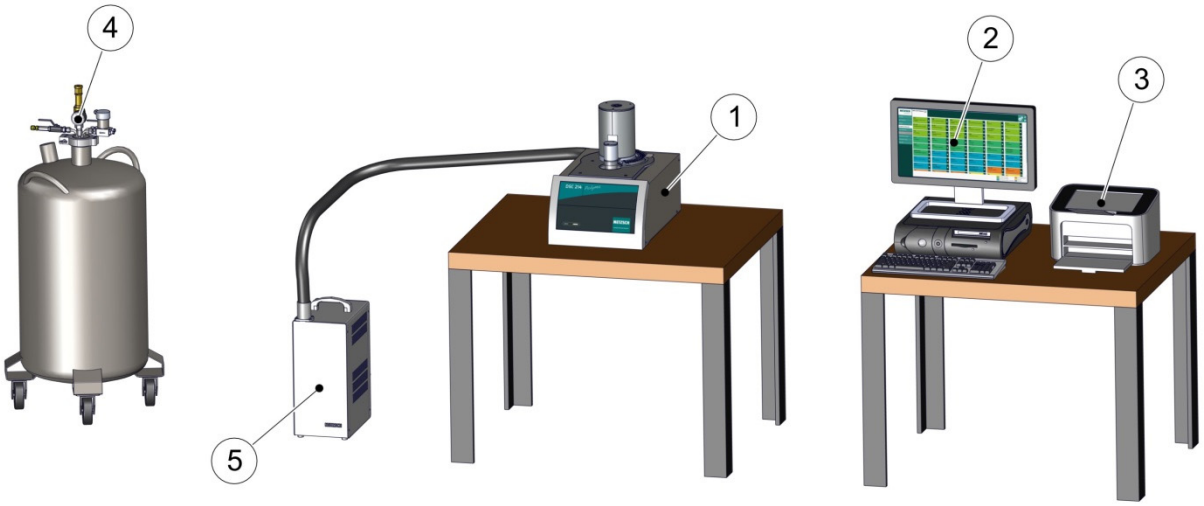
- Deviant configurations on illustrated installation schematics, changes of arrangement of the devices may result (if necessary contact NETZSCH).

Clearance to Wall

NETZSCH recommend

- Minimum 20 cm clearance to wall at the rear side of instrument
- Recess in tabletop for cable- and hose feedthrough

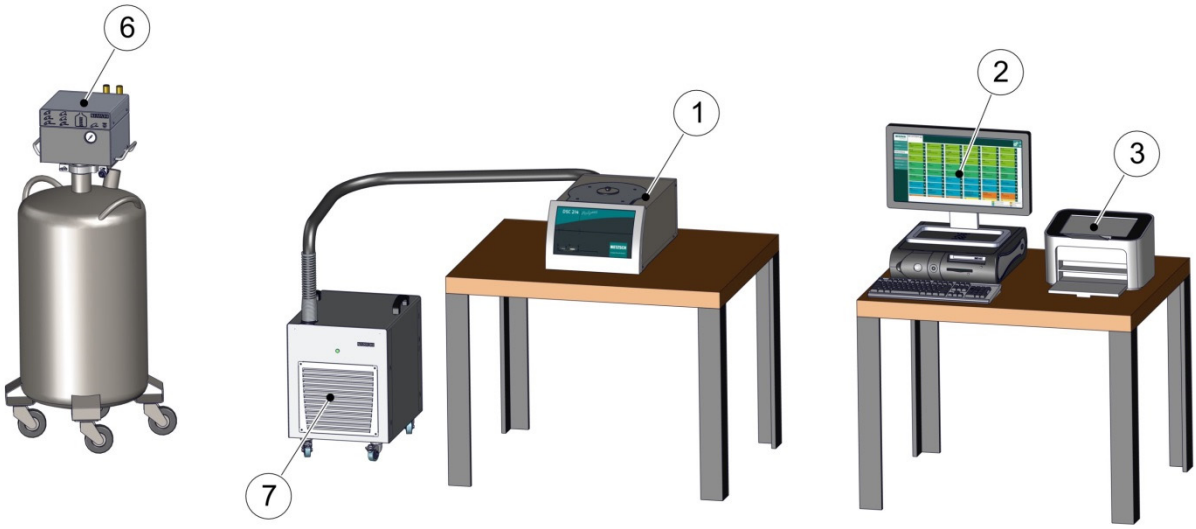
Example 1: DSC 214 Polyma with ASC, CC 200 F3 – Cooling device and Intracooler IC40



Connection advice "phase distribution" for example 1

No.	Component	max. power consumption	Connection voltage	phases / fused circuits 230 V / 16 A		
				L1	L2	L3
1	DSC 214 Polyma (w/o ASC or with ASC)	600 VA	115 VAC / 230 VAC 50/60 Hz	X		
2	Computersystem / Monitor	800 VA	115 / 230 V	X		
3	Printer		115 / 230 V	X		
4	CC 200 F3 dewar head with vessel	-	connected to measuring part (LN2 cooling)	-	-	-
5	Intracooler (Julabo IC 40)	644 VA (inrush current 7-8 A) 633 VA (inrush current 14-16A)	230 V / 50 Hz 115 V / 60 Hz		X	

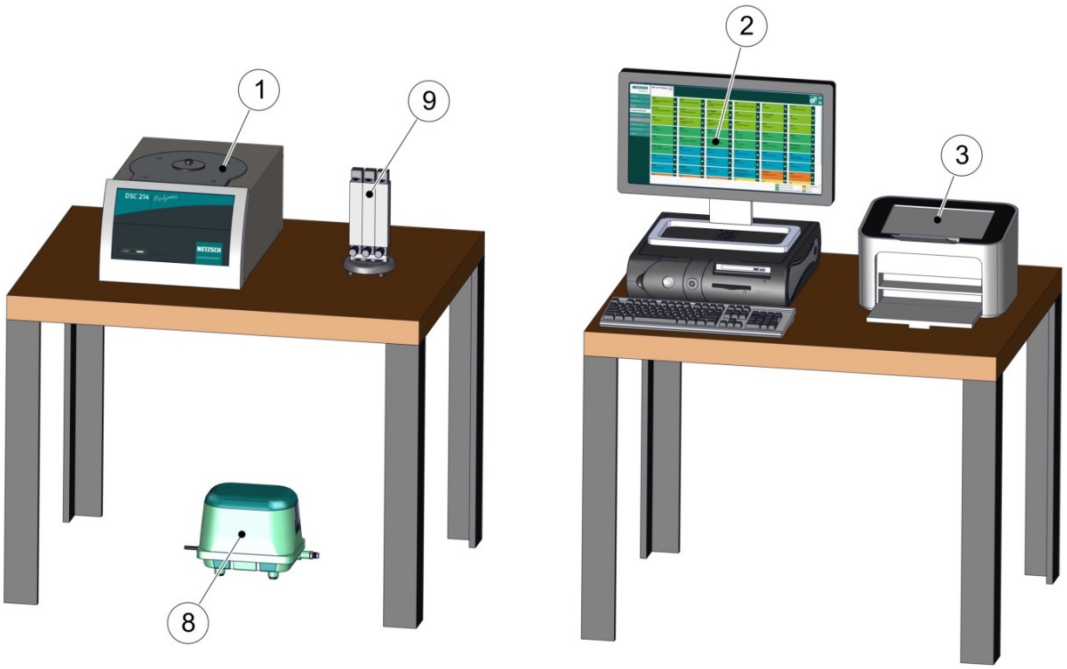
Example 2: DSC 214 Polyma, CC 300 – Cooling and Intracooler IC70



Connection advice "phase distribution" for example 2

No.	Component	max. power consumption	Connection voltage	phases / fused circuits 230 V / 16 A		
				L1	L2	L3
1	DSC 214 Polyma (w/o ASC or with ASC)	600 VA	115 VAC / 230 VAC 50/60 Hz	X		
2	Computersystem / Monitor	800 VA	115 / 230 V	X		
3	Printer		115 / 230 V	X		
6	CC 300 dewar head with vessel	550 VA	115 V / 230 V		X	
7	Intracooler (Julabo IC 70)	920 VA (inrush current 10-12 A) 805 VA (inrush current 15-16A)	230 V / 50-60 Hz 115 V / 60 Hz		X	

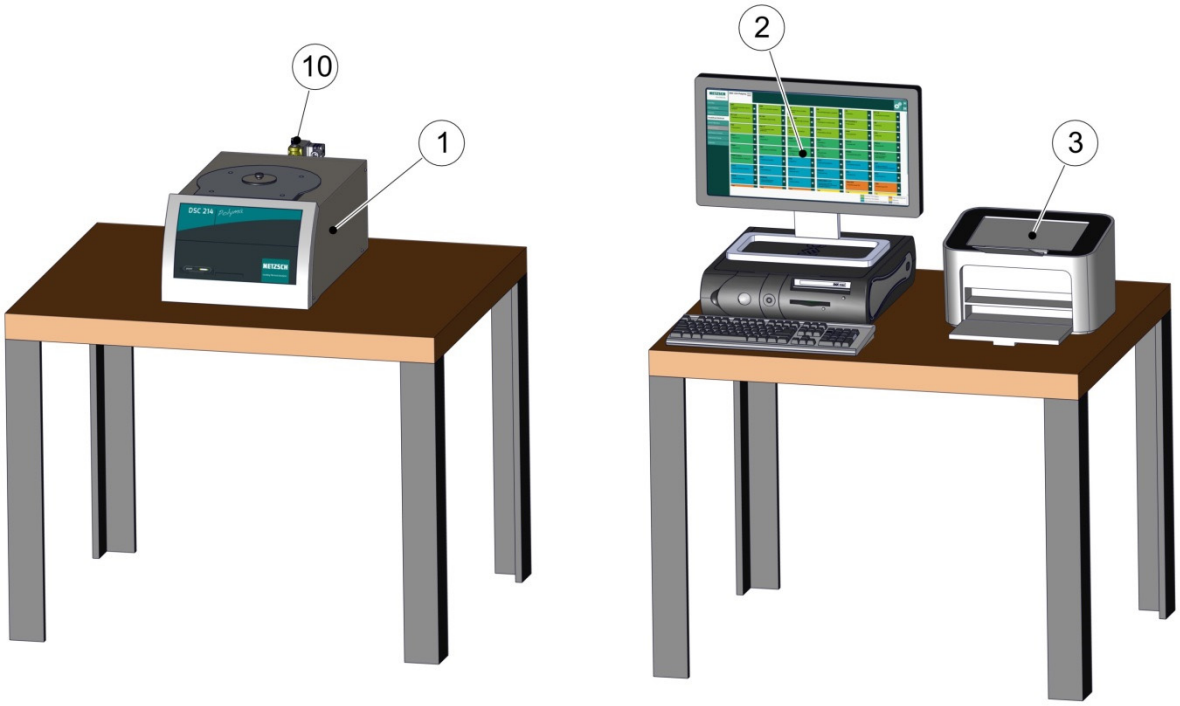
Example 3: DSC 214 Polyma with Linear Small Compressor and gas flow meter



Connection advice "phase distribution" for example 3

No.	Component	max. power consumption	Connection voltage	phases / fused circuits 230 V / 16 A		
				L1	L2	L3
1	DSC 214 Polyma (w/o ASC or with ASC)	600 VA	115 VAC / 230 VAC 50/60 Hz	X		
2	Computersystem / Monitor	800 VA	115 / 230 V	X		
3	Printer		115 / 230 V	X		
8	Linear small compressor (HiBlow HP80)	71 W	connected to measuring part		X	
9	Gas flow meter (one-way / three way)	-	-	-	-	-

Example 4: DSC 214 Polyma with Vortex-Cooling



Connection advice "phase distribution" for example 4

No.	Component	max. power consumption	Connection voltage	phases / fused circuits 230 V / 16 A		
				L1	L2	L3
1	DSC 214 Polyma (w/o ASC or with ASC)	600 VA	115 VAC / 230 VAC 50/60 Hz	X		
2	Computersystem / Monitor	800 VA	115 / 230 V	X		
3	Printer		115 / 230 V	X		
10	Compressed air cooling device (Vortex)	-	connected to measuring part or to Valve Control Box	-	-	-

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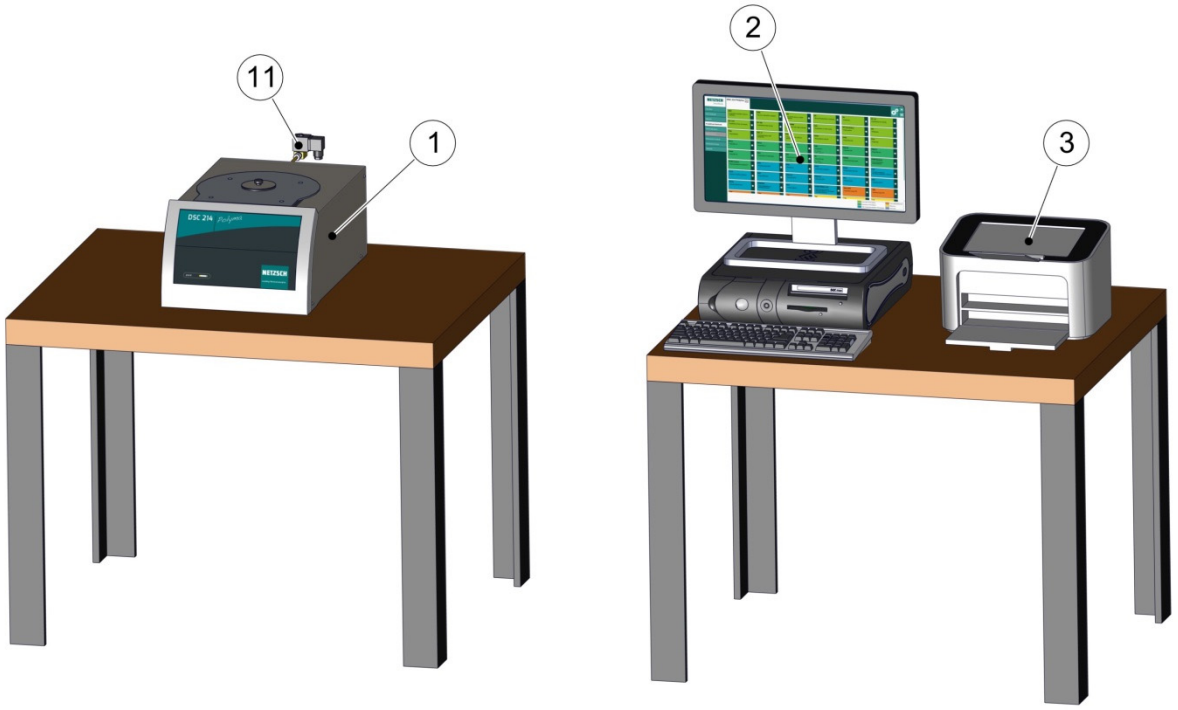
Example 5: DSC 214 Polyma with compressed air cooling device



Connection advice "phase distribution" for example 5

No.	Component	max. power consumption	Connection voltage	phases / fused circuits 230 V / 16 A		
				L1	L2	L3
1	DSC 214 Polyma (w/o ASC or with ASC)	600 VA	115 VAC / 230 VAC 50/60 Hz	X		
2	Computersystem / Monitor	800 VA	115 / 230 V	X		
3	Printer		115 / 230 V	X		
11	Pressurized Air Cooling (magnetic valve)	-	connected to measuring part or to Valve Control Box	X		

Electrical Connections

The power connection is located at the rear side of the DSC 214 instrument.

- Power connection: C14
- Power connection (only for cooling devices): C14
- Communication port: USB-socket

	**NOTICE!** For proper operation power supply must provide voltage within: 115 V AC ± 10 % 230 V AC ± 10 %

For non-interrupted operation of the instrument because of power failure, an uninterruptible power supply (UPS) is recommended.

Gas Connections

The gas connections of the DSC 214 are located at the rear side of the instrument. The required type of gas(es) may vary according to configuration of instrument and application.

Size of Gas Connections:

- 6 mm OD (hose connection; tube fitting Swagelok)

	**NOTICE!** **Important Notes regarding MFC's:** ⇨ Max. input pressure 1.0 bar overpressure - a higher input pressure than 1.0 bar overpressure might damage the MFC's. ⇨ The input pressure should be adjusted at an appropriate gas pressure reducer of the gas supply unit before the gas hoses are connected. Disconnect gas hoses when the maximum pressure might be exceeded, for example after an exchange of the gas bottle and reinstallation of the gas pressure reducer. ⇨ The mass flow controllers are not designed for the use of corrosive, flammable or reducing gases!

NOTICE!

Important Notes regarding exhaust gases:

- ⇨ Discharge exhaust gases of the measuring cell regarding to professional and environmental rules!
- ⇨ Do not discharge exhaust gases of the measuring cell into liquids!
- ⇨ Ensure unblocked exhaust hose.
- ⇨ The used sample composition and the applied purge gas might provoke emission of harmful decomposition products or outgassing. The operator has to ensure that exhaust gases are discharged via gas outlet

Additional required supplies at customers site for optional accessories

Pressurization LN2 Storage Vessel CC 200 F3

For pressurization of the storage vessel an additional compressed gas (N2) should be connected.

Size of Gas Connection:

- 6 mm OD (hose connection; tube fitting Swagelok)

Cooling Device for Pressurized Air (Vortex)

For minimum temperature of 0°C or below (dependent on air pressure). Includes cold air generator and software controlled magnetic valve

Size of pressurized air connection:

- 8 mm OD (hose connection; tube fitting Römer AVS Rapid)

Requirements at customer´s site:

- Pressurized air: throughput approx. 200 l/min, min. pressure 6 bar, max. pressure 10 bar, oil-free, dry (pressure dew point <5 °C), filtered (25 µm or better)

	**NOTICE!**
	Noise level up to 70 dB(A))

On-Off Valve Kit for Compressed Air Cooling

Size of pressurized air connection:

- · 8 mm OD (hose connection; tube fitting Römer AVS Rapid)

Requirements at customer´s site:

- · Pressurized air: pressure max. 2 bar absolute (1 bar overpressure)

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