

FAST CYCLE WATER VAPOR CRYOPUMP CRYO CHILLER DC2 & DC4

Our advanced Cryo Chiller DC2 and DC4 systems are state of the art solution for all industry sectors, where a highly efficient, innovative, cryogenic water vapor trapping system is required. Our systems provide class leading technology, incorporating efficient use of power, speed of cooling / defrosting for optimal uptime, and high precision control, coupled with low cost of ownership, all in a compact size, for the OEM and the end user alike.

In 2014 we were certified in compliance with §6 of the German 'ChemKlimaschutzV'. Since this time we service and provide refrigerants for Polycold®, Telemark and Leycool cryo chillers.

Druschke GmbH is part of a family owned company group. Since 1992 we have been a reliable partner to our customers. Our company group supports End- and OEM customers worldwide. Furthermore, in vacuum technology, we are an independent partner in sales, services, cryo technology and vacuum training.





	Cryo Chiller DC4	Cryo Chiller DC2
Maximum Cooling Capacity	4.0 kW	2.0 kW
Minimum Temperature	-145 °C	-140 °C
Maximum Pump Start Pressure	1 atm	1 atm
Ultimate Operating Pressure	8 X 10 ⁻⁹ mbar	4 X 10 ⁻⁹ mbar
Maximum Cryocoil Surface Area	3 m ²	2 m ²
Theoretical Max Pumping Speed	438,000 l/s	292,000 l/s
Defrost Control	Single or Dual	Single
Time To Defrost	< 3 Minutes	< 3 Minutes
Feed-/Returnline Conections	5/8" Swagelok SS-10-VCR 1/2" Parker CPI Ultra Seal Plain Tube	5/8" Swagelok SS-10-VCR 1/2" Parker CPI Ultra Seal Plain Tube
Recommended Feed-/Returnline Dimensions	1/2" (12mm) and 5/8"(16mm)	1/2" (12mm) and 5/8"(16mm)
Recommended Feed-/Returnline Length	2.5 m	2.5 m
Touchpanel	SIMATIC Touchpanel, Color, 4.3"	SIMATIC Touchpanel, Color, 4.3"
Standard Functions (User Adjustable)	Defrost Termination, Recording Of Alarms.	Defrost Termination, Recording Of Alarms.
Cooling Water (10°C-25°C)	5-10 l/min	5-10 l/min
Cooling Water In/Out	3/4" Female	3/4" Female
Maximun Power Input (Cool Mode, Maximum Load)	15.0 kW (25 Amps)	6.1 kW (11.5 Amps)
Minimum Power Input (Standby Mode)	8.8 kW (14.5 Amps)	3.9 kW (7.0 Amps)
Power Supply	380 - 420 VAC, 3ph, 50 Hz	380 - 420 VAC, 3ph, 50 Hz
Power Conversion	0.32 Wout/Win	0.25 Wout/Win
Dimensions (W X D X H)	950 X 760 X 1740mm	950 X 760 X 1740mm
Weight	405 kg	315 kg
Warranty	24 Months	24 Months
Max Operating Sound Level	69 dB(A)	64 dB(A)
OEM Options	Branding, Colour, HMI, Comms	
Compliance	CE, F-Gas (EU-No.: 517/2014), PED Refrigerants Nontoxic, Nonflammable	

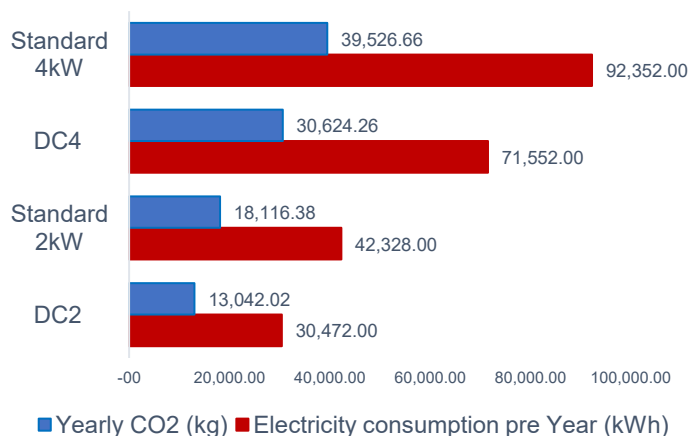
Communication & Control

- PFC (Polycold Compatible 37 Pin AMP Legacy)
- Webapp (Control & Monitor System Via Webbrowser)
- Rest (Rest API Attaches the System To Your App)
- OPC (OPC UA Server Connects the System To Cloud / MES / ERP)
- MQTT (MQTT Publisher Connects the System To Cloud / MES / ERP)
- Modbus-TCP
- Profinet
- Remote Touchpanel (Remote Control of Touchpanel With Pc / Tablet)
- Profibus

Connected Services

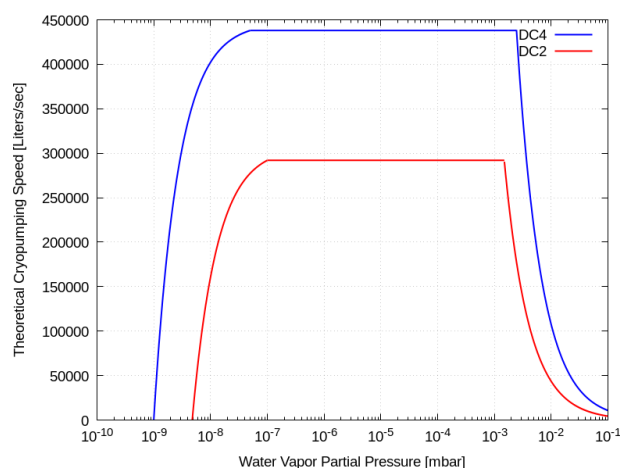
Remote Service Access, E-Mail Reporting

Energy Saving Concept

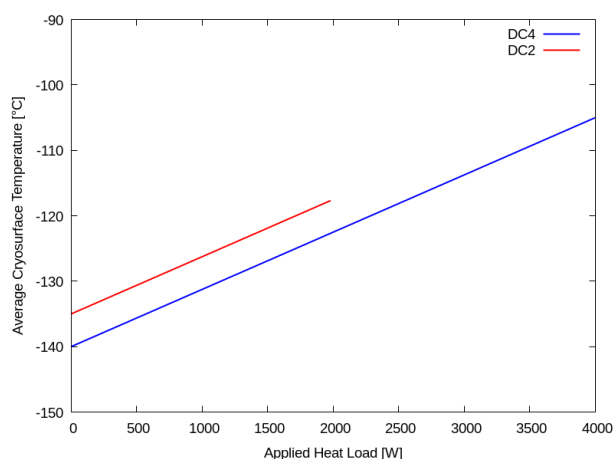


Energy consumption: DC4 and DC2 Active power at full load
16 hours/day and standby 4 hours/day and on operating days
260 days/year
CO2 equivalent German electricity 2021: 428 g/kWh*

Water Vapor Pumping Speed DC4

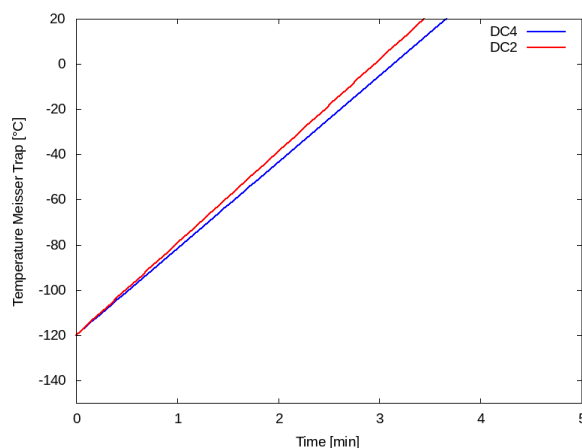


Cooling Capacities DC4



Cooling Capacities: Meissnerfalle Cu 16/1; 0,05m² surface per meter pipe length; surface DC4 2,0m² and DC2 1,0m²; feed- and return line DC4 2 x 2,0m und DC2 2 x 1,5m.

Defrost Meissner trap



Defrost: Meissnerfalle Cu 16/1; 0,05m² surface per meter pipe length; surface DC4 2,0m² and DC2 1,0m²; feed- and return line DC4 2 x 2,0m und DC2 2 x 1,5m.

*Sources: Federal Environment Agency own calculations February 2021
Sources: 2kW&4kW standard as commercially available units that are reliable and verifiable.