



Features and Benefits

- Ensuring essential coolant parameters
- Documentation of quality-relevant data
- Creation of digital laboratory reports
- Cost efficiency through high degree of automation
- I4.0-ready through direct cloud connection

The FCU 5000 is a stationary measuring system for the automation of the cooling lubricant supply. For this purpose, the essential fluid parameters are monitored. The specified target concentration in the system and the tank level can be kept almost constant at the target specifications by automated subsequent metering of cooling lubricant concentrate and refilling of the tank with ready-mixed emulsion. The FCU5000 can be used standalone on central coolant systems or in conjunction with the Hydac Fluid Controller to cover up to 10 measuring points.

The unit continuously monitors concentration, pH, conductivity, and temperature. The measured values are monitored for limit values and, if the set limits are exceeded, signaling takes place on the display and via the electrical interfaces. Due to an intelligent flushing concept, a permanent measurement can be realized without manual intervention.

- Monitoring / control of central coolant systems
- Automation of fluid management on interlinked, decentralized machine tools

Description

Applications

Specifications

General Data

Operating Mode: Suitable for permanent operation

Self Diagnostics: Continuously with error indication using display

Display: 7" Touch Panel

Measured Variables/Ranges:	Concentration: 0...25 %	Temperature: 10...40 °C / 50...104 °F
	pH Value: 0...14	Flow Rate: 3,2...22 l/min
	Electrical Conductivity: 0...10000 µS	Inlet Pressure (optional): 0...8 bar / 116 psi

Calibration Accuracy:	Concentration: ± 0.3 Brix	Temperature: ± 1% (Full Scale)
	pH Value: ± 2,5% (full scale)	Flow Rate: ± 2,5% (Full Scale)
	Electrical Conductivity: ± 1,5% (full scale)	Inlet Pressure (optional): ± 1% (Full Scale)

Sealing Material: FKM

Ambient Temp. Range: 0 ... +60 °C / -17,8 ... +140 °F

Storage Temp. Range: 0 ... +50 °C / -17,8 ... +122 °F

Relative Humidity: 0 ... 70%, non-condensing

CE Mark: EN 61000-6-1 / 2 / 3 / 4

Protection class to DIN 40050: IP 44

Housing: Aluminum/ steel

Weight (Without Accessories): ~ 44 kg

Hydraulic Data

Operating Pressure / Pressure Stability 0...8 bar / 0...116 psi

Measurement Flow Rate ~ 5-20 l/min

Permissible Viscosity Range 1...40mm²/s;...180 Sus

Fluid Temperature Range +10...+40°C / +50...+104 °F

Electrical Data

Power Supply: 230V AC

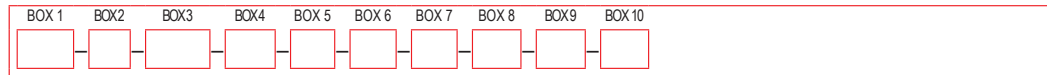
Max. Power / Current Consumption: 0,7 A

Interfaces / Data Logs:	Analog In: 2 x 4...20 mA	Ethernet 3: MQTT
	Analog In Niveau: 2 x 4...20 mA	WiFi: WLAN, 4G (optional)
	Ethernet 1: Config	2x Switching Output NC contact
	Ethernet 2: Modbus TCP / REST	2x Pulse output (2x) (metering pump)

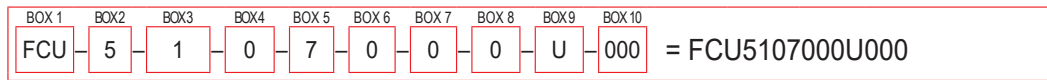
FCU 5000 Fluid Control Unit 5000

Model Number Selection

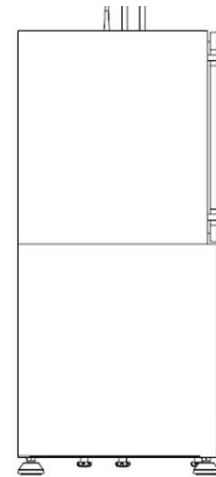
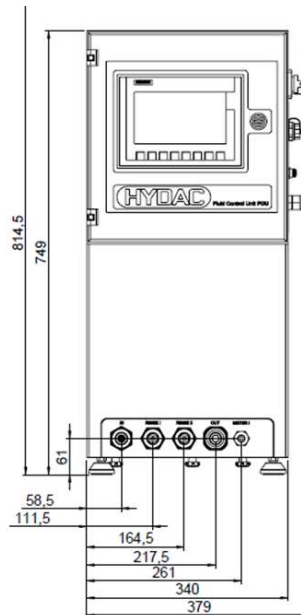
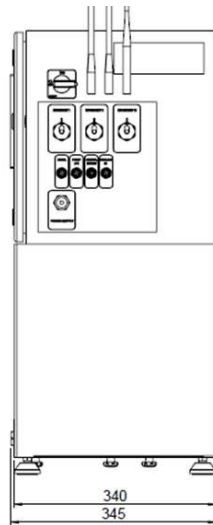
How to Build a Valid Model Number for a Schroeder FC 5000:



Example: NOTE: One option per box



BOX 1	BOX 2	BOX 3	BOX 4
Type	Series	Measured Variables	Additional Functions
FCU	5 = 5000 Series	1 = Concentration, Temperature 2 = Concentration, Temperature, pH-value 3 = Concentration, Temperature, pH-value, Electrical Conductivity	0 = Without Additional Function 1 = Tank Refill
BOX 5	BOX 6	BOX 7	
Fluids	Display	Data Interface	
7 = Water-Based Coolant Lubricants	0 = Standard: 7" Touch Display	0 = Standard (Ethernet: TCP/IP, Modbus TCP) 1 = Standard + MQTT 2 = Standard + MQTT + 4G	
BOX 8	BOX 9	BOX 9	
Options	Supply Voltage	Modification	
0 = ohne 1 = Data Storage 2 = CMX Integration	U = 230V AC	000 = Standard	



Dimensions in mm

Accessories

<u>Designation</u>	<u>Part Number</u>
Metering Pump	
Metering Pump Model 6 Flow Rate 30 l/h	4656596
Hydraulics	
Wombat filter housing WBF201-B-B-L-F-Z	4158239
Fluid Controller	
FC 5000	4724385

Consumable Materials

<u>Designation</u>	<u>Part Number</u>
Filter bag 5µm FCU5000	4619116
pH-electrode	4571815