

SPECIFICATION SHEET



Automatic Online Analyzer for Total Copper

HMA-TCU

HMA-TCU is an on-line colorimetric analyzer for total copper in industrial wastewater.

Features

Low waste solution

The amount of waste solution is only 1.1L/month. (at 4H measurement interval)

Low reagent consumption

No need for reagent change for 1 month.

Auto range with automatic dilution

HMA-TCU has two measurement ranges (0.1 - 3, 0.5 - 10mg/L) which can be switched automatically depends on the concentration of total Copper.

Automatic backwashing sample filter

Automatic cleaning with each cycle

Automatic calibration

5.7 inch color LCD touch panel

Specification

Product name	: Automatic Online Analyzer for Total Copper
Model	: HMA-TCU
Measurement method	: Bathocuproine absorptiometry
Measurement Range	: 0.1 - 10mg/L
Repeatability	: Within $\pm 5\%$
Display	: 5.7 inch LCD display
Transmission out put	: 4 - 20mADC (Load resistance less than 600 Ω) 2 channels CH1; Measured Data CH2; Temperature of reactor or inside temperature of the panel (selectable)
Contact out put	: Transfer contact 2 points (220VAC 3A, 24VDC 3A) (1) Equipment Failure (2) Select one from followings (a) In measurement operation (b) Out of upper limit (c) Out of lower limit
Sample water conditions	: Consumption ; 1 - 3L/min Pressure ; 20 - 50kPa Temperature ; 0 - 50°C SS and colored components must be removed



Power requirements	: 220VAC ($\pm 10\%$), 50/60Hz
Power consumption	: 380VA(max.), 130W(Average)
Installation	: Ambient temperature ; 10 - 40°C Ambient humidity ; Less than 85%RH Indoor installation
Dimensions	: 600(W)x255(D)x900(H)mm
Weight	: Approx. 50kg

Measuring Method

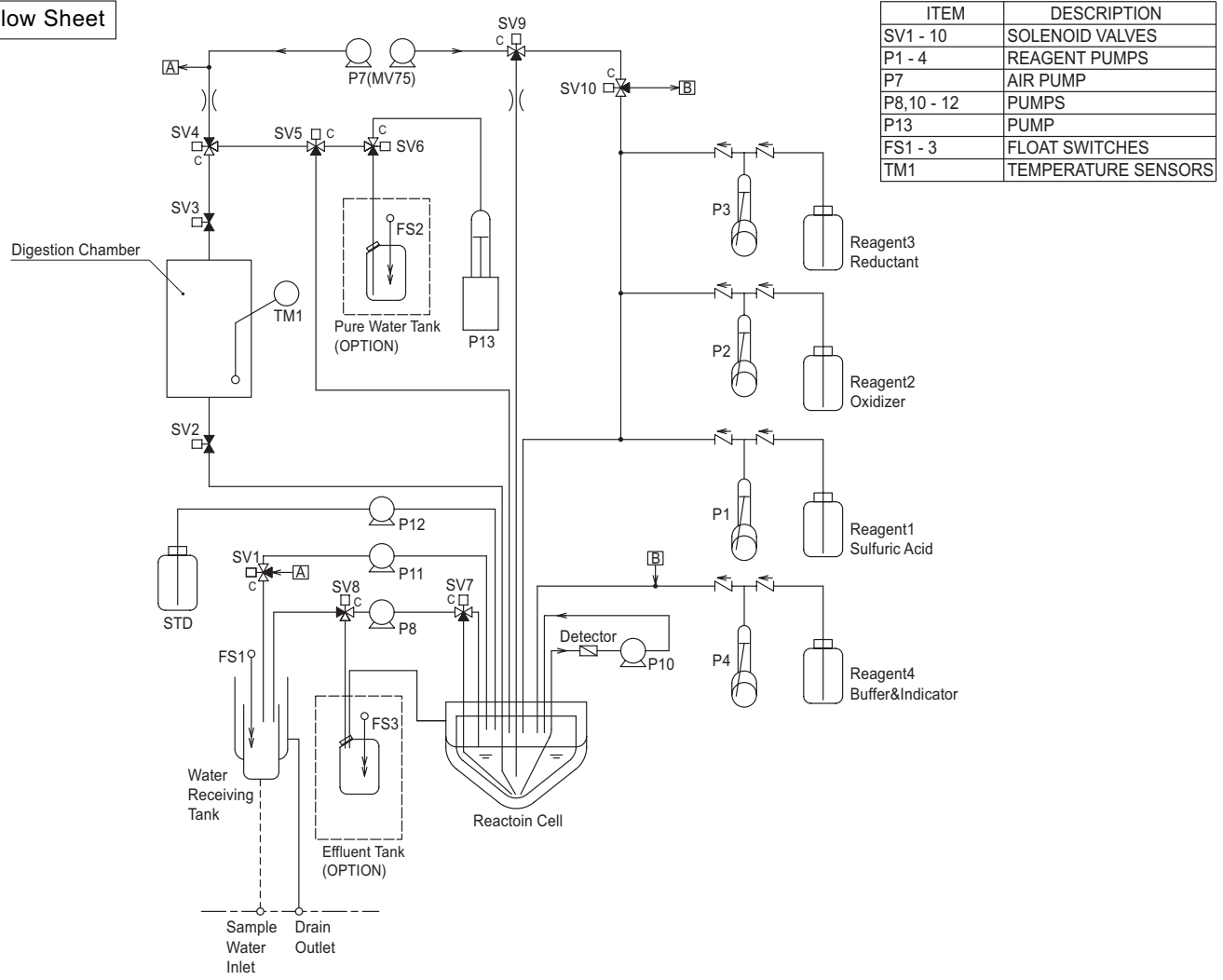
The Bathocuproine absorptiometry method is adopted. The sample is pumped into the high temperature digestion unit and added the digestion reagent. Then total copper is digested into dissolved Cu^{2+} ion. And reducing reagent is added into the solution. Cu^{2+} ion is reduced into Cu^+ ion by the reducing reagent. Then Cu^+ ion react with Bathocuproine in the light acidic solution and form the brown colored complex.

Concentration of total copper can be calculated by absorbance at 470nm.

Options

Pure Water Tank	20L, with level sensor
Waste Water Tank	20L, with level sensor

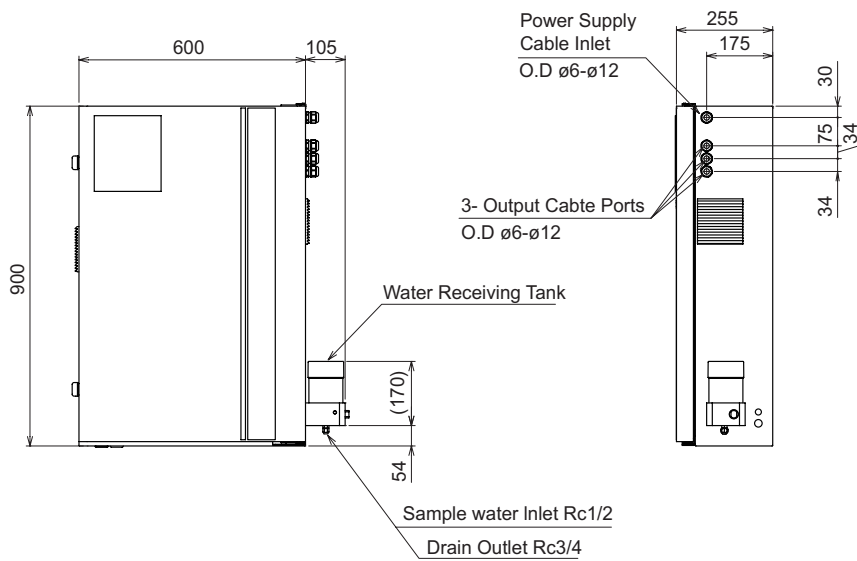
Flow Sheet



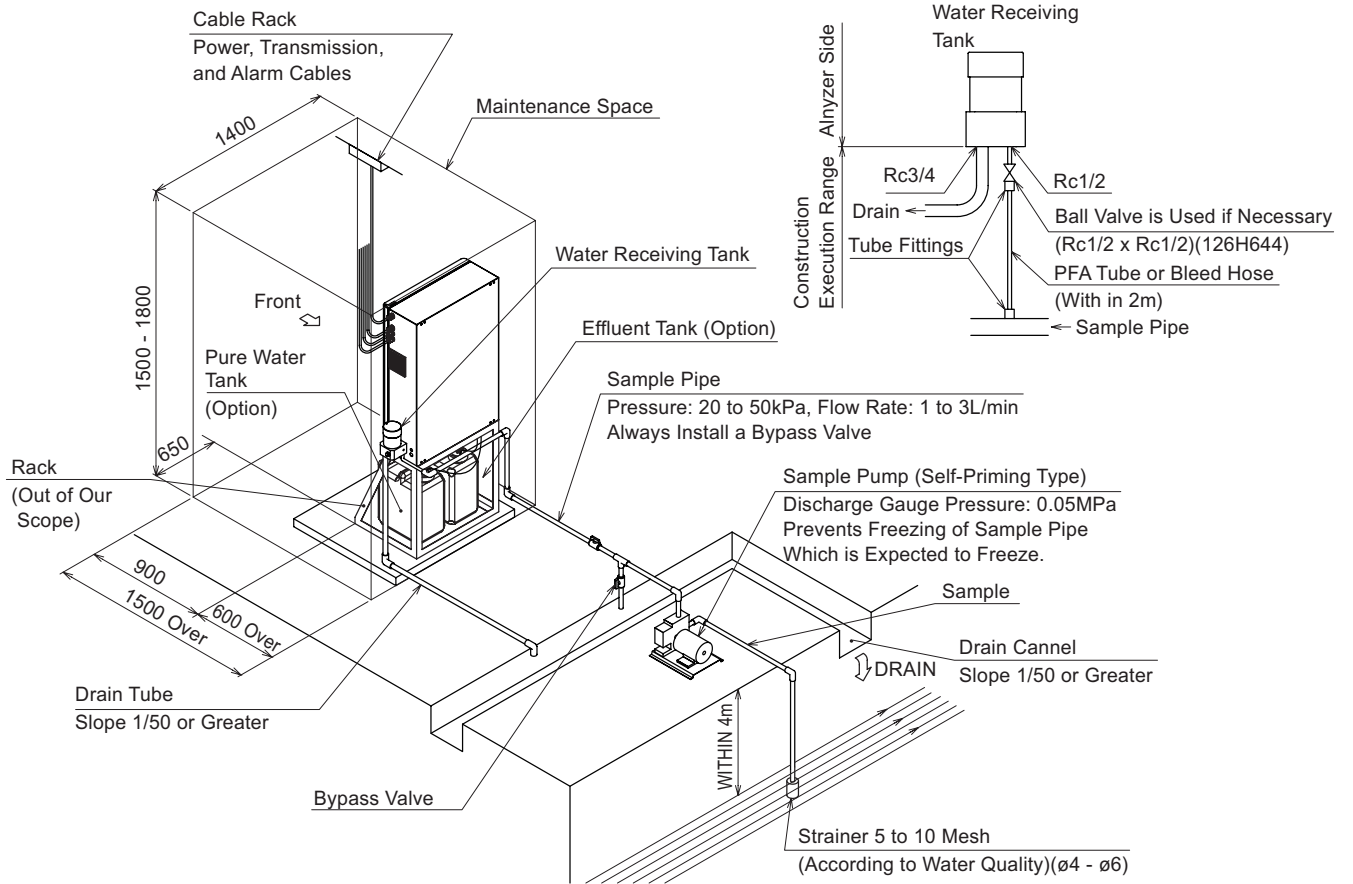
ITEM	DESCRIPTION
SV1 - 10	SOLENOID VALVES
P1 - 4	REAGENT PUMPS
P7	AIR PUMP
P8,10 - 12	PUMPS
P13	PUMP
FS1 - 3	FLOAT SWITCHES
TM1	TEMPERATURE SENSORS

Dimensions

Unit : mm



Installation (Example)



Note

1. Remove Dirt, etc by Thoroughly Flushing the Inside of the Piping Before Piping to the Equipment. Dirt in the Piping will Clog the Solenoid Valves.
2. Rack/Mounting Brackets Should be Provided by the Customer.

Product Code

HMATCU-0-	□	□	□	
	A		Pure Water Tank
	B		None
				Included
	A		Wast Water Tank
	B		None
				Included
				Markings
	1		Japanese
	2		Chinese
	3		English



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CAUTION

Do not operate products before consulting instruction manual.