

CONTAMINATION MONITORS

CTU 1000 Series

Contamination Test Unit



Description

The HYDAC Cleanliness Test Unit CTU 1000 is designed to determine the technical cleanliness especially present on minor contaminated components.

The CTU 1000 was developed due to increased demand for system cleanliness and for monitoring and optimizing the cleanliness, of smaller components during production, storage and system assembly.

By determining the type, size and quantity of the contamination, quality standards can be checked and documented and the necessary steps towards optimization can be taken.

Applications

- Automotive suppliers
- Gear box builders
- Engine builders
- Manufacturers of hydraulic and lubrication systems and components

Benefits to You

- Cost reduction through lower production failure rates
- Identification and elimination of weak process steps
- Optimization of both internal and external handling processes
- Establishing of cleanliness standards both internal and external
- Documentation of component cleanliness
- Survey of fluid cleanliness and filtration concepts

Technical Specifications

Overall dimensions	See next page
Weight	CTU10xx: ≈ 595 lbs (270 kg) ≈ 640 lbs (290 kg) w/ultrasonic unit CTU12xx: ≈ 685 lbs (310 kg) ≈ 728 lbs (330 kg) w/ultrasonic unit
Type	Mobile (mounted on castors)
Power Consumption	600 W (800 W with ultrasonic unit)
Ambient Temperature	59° to 82°F (15° to 28°C)
Cleanroom Module	
Material of cleanroom	polished stainless steel
Filling w/analysis fluid	via analysis cabinet
Max. load capacity (evenly distributed)	CTU10xx = 105 lbs (47.5 kg) CTU12xx = 105 lbs (47.5 kg)
Control system	PC controlled with user-friendly software, rinse options and rinsing volume programmable
Reservoir and Filtration Module	
Membrane holder	for ø1.85" (47 mm) to 1.97" (50 mm) filter membranes
Vacuum strainer	for quicker filtration of the analysis fluid
Diffuser	Distribution of analysis fluid on the membrane
Operating pressure	-12 to 87 psi (-0.8 to 6 bar)
Analysis fluid reservoir	2x 5.2 gal (20 l) (1x reservoir, 1x suction reservoir)
Reservoir change-over	automatic
Filtration of analysis fluid	Fine filtration according ISO 4406 min. ISO 12/9
Filter size, filtration rating	2x LF BN/HC 60, 3 µm (1xx0 series) 2x MRF-1-E/1, 1µm (1xx1 series)
Integrated drip tray	6.6 gal (25 liter) with drainage
Ultrasound	100 W, 40KHz
Basket for ultrasonic unit	Dimensions: 7.9" (200 mm) x 4.3" (110 mm) x 1.6" (40 mm); Mesh width: 0.16" (4 mm)
Emission sound pressure level	L _{PA} < 70 db(A)
Services to be provided by operator*	
Compressed air	Air Filtered (min. 5µm) and dry compressed air, max. 94.3 (6.5 bar) to 101.5 psi (7.0 bar) Air flow rate: 15.8 gpm (60 lpm), Supply connection: DN 7.2
Power Supply	according to order

*Not supplied

The information in this catalog relates to the operating conditions and applications described. For applications or operating conditions not described, please contact the relevant technical department. Subject to technical modifications.

Model Code

CTU 1 0 5 0 - M - Z - Z / - EA

Type

CTU = Contamination Test Unit

Series

1 = 1000 series

Size

0 = Dimensions of analysis chamber (cleanbox): 300 mm x 765 mm x 365 mm (height (approx.) x width x depth)
 2 = Dimensions of analysis chamber (cleanbox): 460 mm x 765 mm x 650 mm (height (approx.) x width x depth)

Version

4 = Version 2014 – Compression closure, cleanbox – Internal extraction, cleanbox – filled via 3/2 way ball valve and filling hose – Monitor arm (only 124x) – Nozzles with plug-in connection (plug-in nipple in analysis chamber)
 5 = Version 2020 – nozzle and earthing – altered control – hardware

Test Liquid

0 = Solvent cleaner (G60 Special, Flashpoint > 140°F (60°C), lower explosion limit > 0.6 Vol.%)
 1 = Water with surfactants, admissible pH-range 6 to 10, no desalinated water

Supply Voltage

K = 120 V AC / 60Hz / 1 Phase USA / CDN
 M = 230 V AC / 50Hz / 1 Phase Europe
 N = 240 V AC / 50Hz / 1 Phase UK
 O = 240 V AC / 50Hz / 1 phase Australia
 P = 100 V AC / 50Hz / 1 phase Japan

Extraction Process

Z = Spray (medium pressure)
 U = Spray (medium pressure) plus ultrasound

Supplementary Details

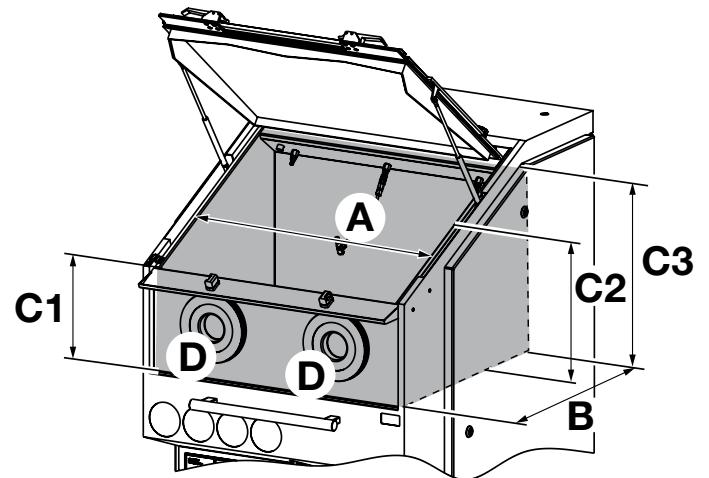
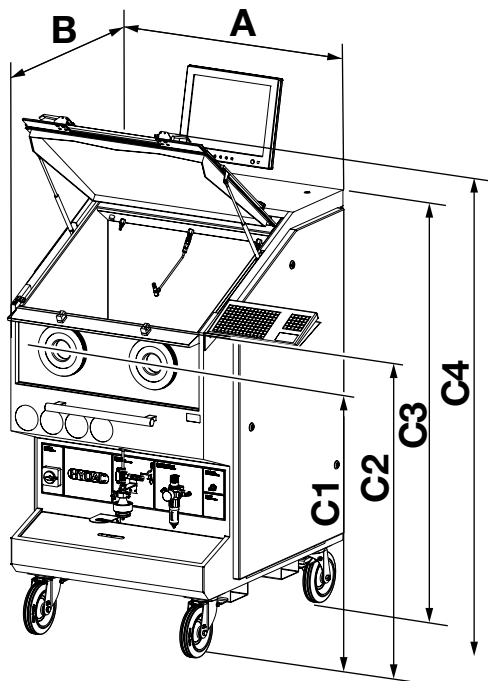
Z = standard
 R = external rinsing connections 0.24" (Ø 6mm), between the manual actions
 A = Fluid connections A/B/C and R fitted with rapid quick-release fastener on outside, control line to CTM-E modules, manual change-over for filter membrane holder

EA Extraction AIR

Air extraction only possible for variants 1x41 and 1x51

Note: Test Liquid not supplied with unit - G60 Special, 30L; PN 03205511

Dimensions



Type	A	B	C1	C2	C3	C4
CTU10XX	38.8 (985)	33.5 (850)	46.1 (1170)	50.8 (1290)	59.1 (1500)	≈ 66.9 ≈ (1700)
CTU12XX	35.8 (910)	44.9 (1140)	45.7 (1160)	50.2 (1280)	68.9 (1750)	≈ 81.5 ≈ (2070)

Type	A	B	C1	C2	C3	D
CTU10XX	30.1 (765)	14.4 (365)	10.2 (260)	13.2 (335)	15 (380)	2x ø 7.1 2x ø 180
CTU12XX	30.1 (765)	25.6 (650)	11.8 (300)	17.5 (445)	22 (560)	2x ø 7.1 2x ø 180

Dimensions are inches (millimeters) and for general information only, all critical dimensions should be verified by requesting a certified print.