



ContaminationTest Unit CTU 1000 series

Description

The HYDAC ContaminationTest Unit CTU 1000 series is used to determine the technical cleanliness of lightly contaminated components.

The reasons behind this are the ever increasing demands made on life expectancy of individual components and assemblies which has meant growing demands for technical cleanliness of components and systems. Starting with production, assembly and storage, this extends right through to operation of the complete system.

Analysing the type, size and quantity of contamination enables quality standards to be verified and documented, and the requisite optimisation measures to be implemented.

Applications

- Automotive and supplier industry
- Gearbox and engine builders
- Mobile hydraulics
- Manufacturers of hydraulic and lubrication systems and components

Advantages

- Reduction in costs as a result of less production waste
- Identification and elimination of weak points
- Reduction in production-stage failures
- Optimisation of both internal and external handling processes
- Customised documentation of the technical cleanliness of components

Technical Data

Outer dimensions	Corresponding representation on the following page
Nominal flow of test liquid	0–4.5 l/min
Weight	CTU10xx: ≈ 270 kg ≈ 290 kg with ultrasonic unit CTU12xx: ≈ 310 kg ≈ 330 kg with ultrasonic unit
Housing material	S235JR powder-coated
Model	Mobile
Power consumption	600 W (800 W with ultrasonic unit)
Ambient temperature	15 to 28 °C
Controller	IPC/PLC-controlled with user-friendly software, creation of the extraction procedure with parameters
Emission sound pressure level	LPA < 70 db(A)
Ultrasonic sound	100 W, 40 KHz
Basket for ultrasonic unit	Dimensions: 200 x 110 x 40 mm Mesh width: 4 mm

Extraction room (clean box)

Filter membrane holder	for Ø 47 mm filter membranes
Material	Polished stainless steel
Inner dimensions	Corresponding representation on the following page
Maximum load-carrying capacity	CTU10xx = 47.5 kg* CTU12xx = 47.5 kg*

Machine compartment

Operating pressure	-0.8 to 6 bar
Test liquid reservoir	2x 18 l (1x storage reservoir, 1x suction reservoir)
Reservoir switch-over	Automatic
Filtration of analysis fluid	Fine filtration to ISO 4406 min. ISO 12/9
Filtration rating	1 µm
Vacuum generator	Metering orifice (Venturi)
Collecting pan	Integrated 25 litres with drain

To be provided by the owner (not included)

Compressed air	Pre-filtered (min. 5 µm) and dry compressed air, 6.5 to 7.0 bar Air flow rate: 60 l/min, Connection: nipple DN 7.2
Supply voltage	Acc. to model code

* for evenly distributed load, no point loading

Model code

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

Type

CTU = Contamination Test Unit

Series

1 = 1000 series

Size

0 = Dimensions extraction chamber:
300 mm x 765 mm x 365 mm
(Height (avg.) x width x depth)
2 = Dimensions extraction chamber:
460 mm x 765 mm x 650 mm
(Height (avg.) x width x depth)

Version

5 = Version 2020
– Software ConTes
– 1 µm filtration
– Automatic pressure control
– Compression closure
– Internal extraction
– Filling with filling hose
– Monitor arm (only 125 x)

Test fluid

0 = Solvent cleaner (G60 special, flash point ≥ 60 °C, lower explosion limit > 0.5 vol. %), Feroclean 261
1 = Solvent cleaner and water with surfactants, permissible pH values 6 to 10, no deionised water

Voltage supply

K = 120 V AC / 60 Hz / 1 phase USA / Canada
M = 230 V AC / 50–60 Hz / 1 phase Europe
N = 240 V AC / 50 Hz / 1 phase UK

Extraction method

Z = spray, medium pressure
U = spray, medium pressure plus ultrasonic sound

Supplementary details

Z = series
R = external flushing connections Ø 6 mm, between 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 (possible for 1x50 and 1x51)

Blank values

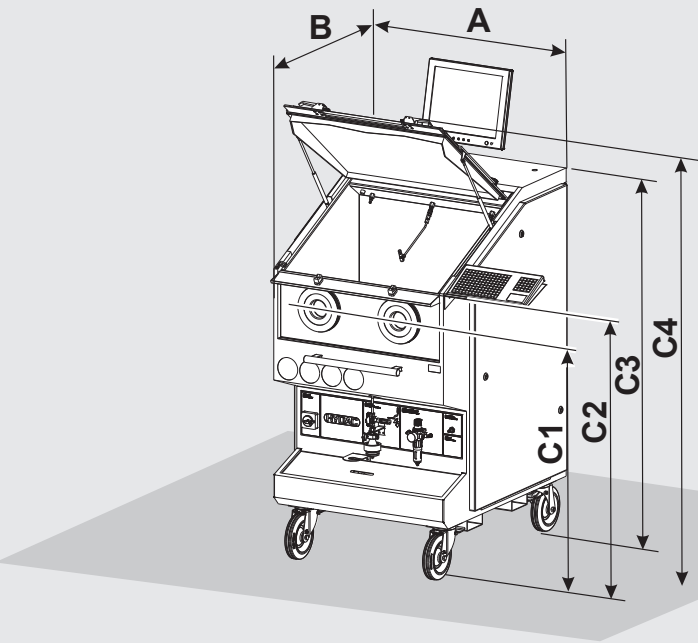
All data is dependent on the ambient conditions.

Surroundings	CTU 1xxx
Clean room	0.1 to 0.2 mg
Laboratory	0.2 to 0.4 mg
Separate sampling room	0.2 to 0.6 mg
Factory building	0.2 to 0.8 mg

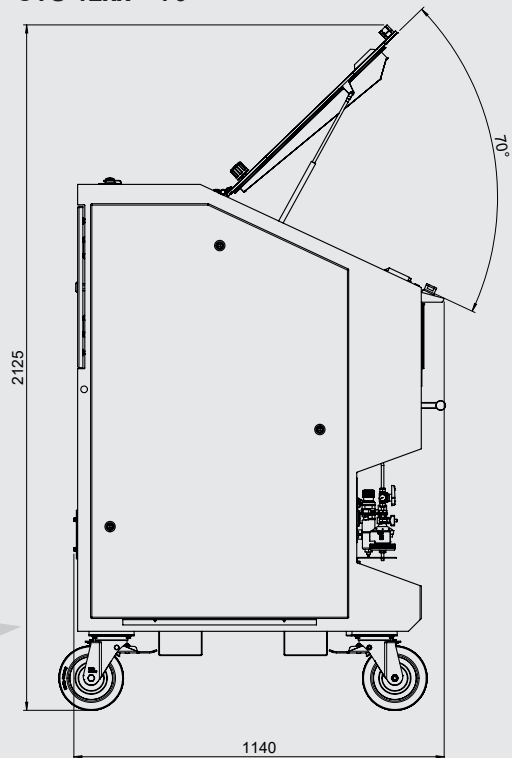
Max. particle size (metallic) [µm]	Workload	Cleaning time [h] after brief shutdown (≤ 24 h)	Cleaning time [h] after extended shutdown (> 24 h)
100*	high	1.5 to 4	3 to 5
150*	Medium	1 to 2	2 to 4
250*	Low	0.5 to 1.5	1 to 3

* applies to a maximum membrane load of 0.8 mg

Dimensions



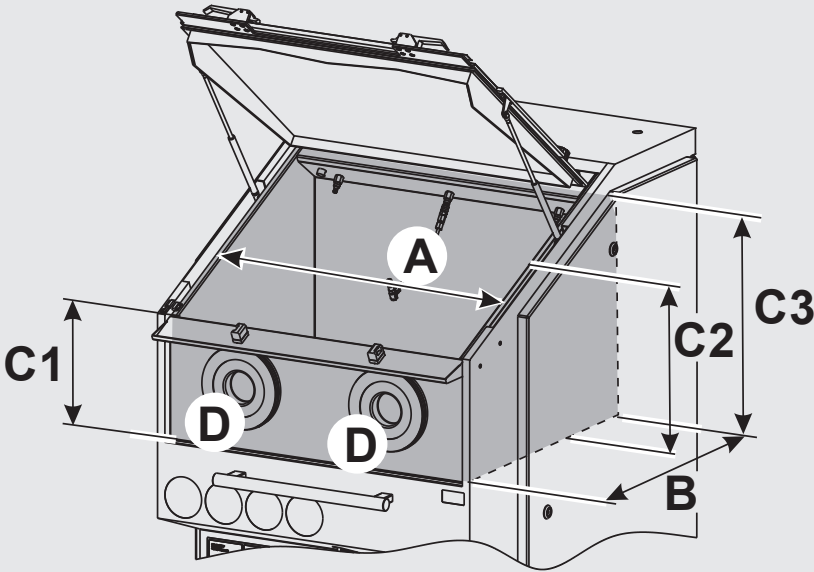
Opening angle of the disc
CTU 12xx = 70 °



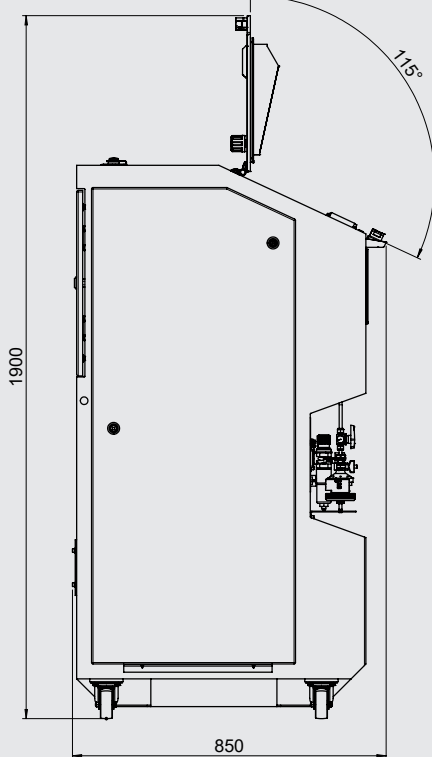
	A	B	C1	C2	C3	C4
CTU10XX	985	850	1170	1290	1500	≈ 1900
CTU12XX	910	1140	1160	1280	1750	≈ 2150

All dimensions in mm

Dimensions of the extraction chamber



Opening angle of the disc
CTU 10xx = 115 °



	A	B	C1	C2	C3	EE
CTU10XX	765	365	260	335	380	2x Ø 180
CTU12XX	765	650	300	445	560	2x Ø 180

All dimensions in mm

Note

The information in this brochure 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.

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