Contamination Test Unit Series

2.4 gpm **CTU 5xxx**

Features and Benefits

- Modular design with option of changing the extraction chambers
- Flow rate of test fluid up to 2.4 gpm
- User-friendly height adjustment

Applications

- Automotive and auto industry suppliers
- Gearbox/engine manufacturing
- Mobile hydraulics
- Production of hydraulic/lubrication system components
- Aviation industry
- Battery production

The HYDAC Contamination Test Unit CTU 5xxx series is used to determine the technical cleanliness of mildly contaminated components. This is important because of the constantly increasing requirements for the service lives of individual parts and assemblies, which call for stricter standards for the technical cleanliness of components and systems. Starting with production, assembly and storage and extending to operation of the entire system. By determining the type, size, and quantity of contamination, quality standards can be checked and documented and the necessary optimisation measures can be taken.

Technical Data

CTU-SC-5xxx Series	
Unit Dimensions:	68.5”x44.9”x28.8” / 1740x1141x731 mm
Weight:	462 lb / 210 kg
Design:	Mobile
Material, Housing:	S235JR powder-coated
Supply Voltage:	acc. to model code
Power Consumption:	600 W
Ambient Temperature:	59 to 82.4°F / 15 to 28°C
Controller	
Monitor:	21.5” / 546 mm
Tank Volume:	10.5 gallons / 40 liters
Membrane Holder:	Single-stage (47 mm) (optionally cascade of up to three)
Displacement Volume:	0.13 - 2.4gpm / 0.5–9 l/min
Extraction Volume:	.925 gpm / 3.5 l/min
Filtration:	1µm (absolute)
Sound Pressure Level L PA:	< 70 db(A)
Interface of Extraction Chamber	
Stroke Height:	11.8 in / 300 mm
Payload:	Max 220 (incl extraction chamber) lb; Max. 100 (incl. extraction chamber) kg
Potential Extraction Methods	
Wet:	Spray
Wet:	Flushing
Wet:	Ultrasound
Dry:	Air extraction

CTU 5xxx

Technical Data cont.

CTU-SC-5xxx Series	50xx	51xx	53xx	57xx	58xx
Unit Dimensions:	H= 21 in / 533 mm W= 32.1 in / 816 mm D= 32.1 in / 816 mm	TBD	H= 26 in / 660 mm W= 34.9 in / 886 mm D= 27.1 in / 687.5 mm	H= 27.6 in / 700 mm W= 53.8 in / 1367 mm D= 27.2 in / 691 mm	H= 31.5 in / 800 mm W= 53.8 in / 1367 mm D= 31.1 in / 791 mm
Weight:	55 lb / 5 kg	TBD	66 lb / 30 kg	143 lb / 65 kg	165 lb / 75 kg
Material, Housing:	S235JR powder-coated	1.4404	TBD	1.4301	1.4301
Extraction Chamber					
Unit Dimensions:	H= 4.1 in / 104 mm D= 11.3 in / 286 mm	H= 4.1 in / 104 mm D= 11.3 in / 286 mm	H= 15.6 - 16.9 in / 397 - 430 mm W= 19.1 in / 486 mm D= 10 - 16.2 in / 255 - 412 mm	H= 15.7 in / 400 mm W= 51 in / 1296 mm D= 19.7 in / 500 mm	H= 19.7 in / 500 mm W= 51 in / 1296 mm D= 23.6 in / 600 mm
Material:	1.4301	1.4304	1.4304	1.4301	1.4301
Maximum Payload:	44 lb / 20 kg	TBD	44 lb / 20 kg	66 lb / 30 kg	44 lb / 20 kg
Number of Orifices:	2	3	3	3	3
Shelf Grille:	In Scope of Supply				
Blank Values:	See Table Below				
Interventions:	2 gloves		3 gloves		
Opening:	Cover for Loading				

How to Build a Valid Model Number for a Schroeder CTU 5xxx Supply Module:

Model	Supply Module	Series	Construction Variamt	Design	Test Fluid	Supply Voltage	Option	Supplementary Details

****Starting from the left to the right you will choose your Model and work your way through each category as illustrated above.***

Model	Supply Module	Series	Construction Variant	Design
☐ **CTU =** Contamination Test Unit	☐ **SC =** Supply & Control	☐ **5 =** 5000 Series	☐ **0 =** Tank	☐ **0 =** Version 2022

Test Fluid	Supply Voltage	Option (for future applications)	Supplementary Details
☐ **0 =** Solvent ☐ **2 =** DI Water or Solvent	☐ **M =** 230V / 1Ph / 50Hz ☐ **K =** 120V / 1Ph / 60Hz	☐ **Z =** Series	☐ **Z =** Series ☐ **A =** Fluid Ports A/B/C and R Positioned Externally

How to Build a Valid Model Number for a Schroeder CTU-ES Extraction Module:

Type	Extraction Module	Series	Size	Design	Test Fluid	Supply Voltage	Extraction Procedure	Supplementary Details

**Starting from the left to the right you will choose your Model and work your way through each category as illustrated above.*

Type	Extraction Module	Series	Size
☐ **CTU =** Contamination Test Unit	☐ **ES =** Spray Extraction	☐ **5 =** 5000 Series	☐ **0 =** Ø 11.3" x H 4.0" / Ø 286 x H 102 mm ☐ **1 =** Ø 20.3 x H 17.7 in / Ø 516 x H 449 mm ☐ **3 =** W x D x H - 13.8 x 15.7 x 15.7 in / W x D x H - 350 x 400 x 400 mm ☐ **7 =** W x D x H - 51.0 x 19.7 x 15.7 in / W x D x H - 1296 x 500 x 400 mm ☐ **8 =** W x D x H - 51.0 x 23.6 x 19.7 in / W x D x H - 1296 x 600 x 500 mm

Design	Test Fluid	Supply Voltage
☐ **0 =** Version 2022	☐ **0 =** Solvent ☐ **2 =** DI Water or Solvent	☐ **Z =** None ☐ **M =** 230V / 1Ph / 50Hz ☐ **K =** 120V / 1Ph / 60Hz ☐ **U =** 24V DC

Extraction Procedure	Supplementary Details
☐ **Z =** spraying, medium pressure ☐ **U =** spraying, medium pressure plus ultrasound ☐ **EU =** spraying, medium pressure plus air extraction ☐ **UA =** spraying, medium pressure ultrasound and air extraction	☐ **R =** external flushing connections Ø 6 mm, between manual interventions ☐ **Z =** None

Blank Values

All specifications are dependent on ambient conditions.	
Environment	**CTU-ES-50xx**
Clean Room	0.1 – 0.2 mg
Laboratory	0.1 – 0.2 mg
Separate Sampling Room	0.1 – 0.2 mg
Workshop	0.2 – 0.3 mg

Max. Particle Size (metallic) [µm]	Effort	Cleaning time [h] after brief standstill time (≤ 24 h)	Cleaning time [h] after longer standstill time (> 24 h)
70*	High	1.5 – 4	3 – 5
100*	Medium	1 – 2	2 – 4
150*	Low	0.5 – 1.5	1 – 3

*At maximum membrane loading of 0.8 mg

Environment	CTU-ES-57xx	CTU-ES-58xx
Clean Room	0.4 – 0.6 mg	0.4 – 0.6 mg
Laboratory	0.4 – 0.6 mg	0.4 – 0.6 mg
Separate Sampling Room	0.6 – 1.2 mg	0.6 – 1.2 mg
Workshop	1 – 1.4 mg	1 – 1.4 mg

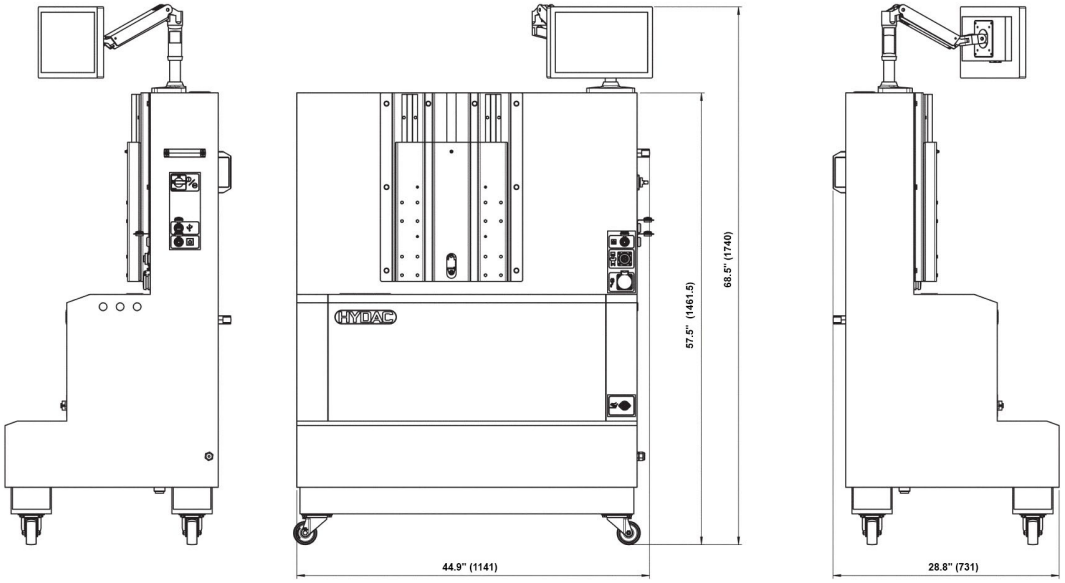
Max. Particle Size (metallic) [µm]	Effort	Cleaning time [h] after brief standstill time (≤ 24 h)	Cleaning time [h] after longer standstill time (> 24 h)
150*	High	1 – 4	3 – 8
250*	Medium	1 – 3	2 – 6
500*	Low	1 – 2	1 – 3

*At maximum membrane loading of 0.8 mg

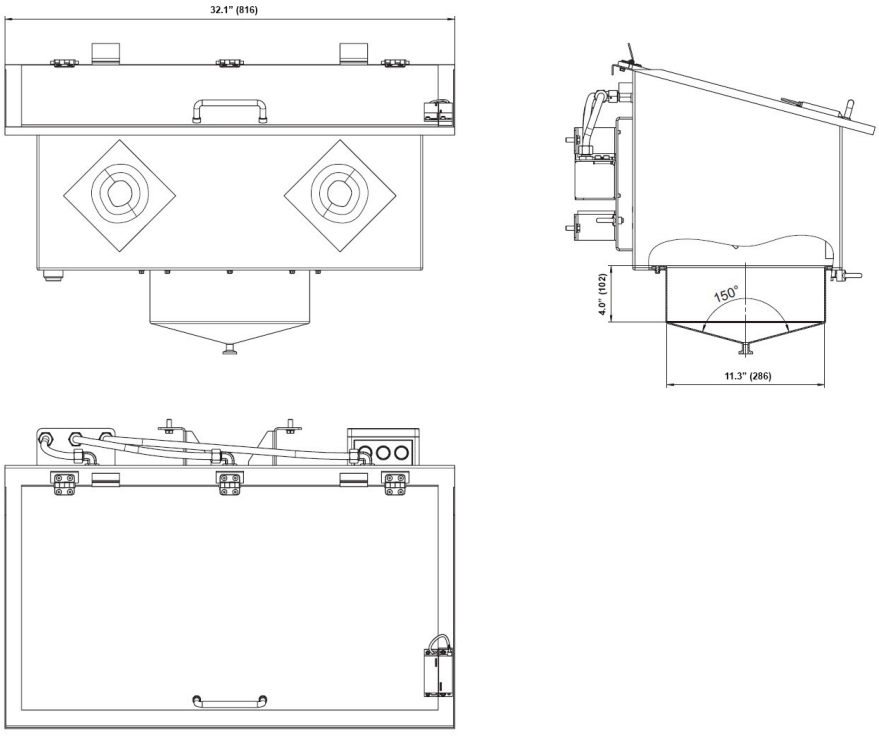
The blank values for sizes 51xx and 53xx have not yet been determined.

Unit Dimensions

CTU-SC-5xxx

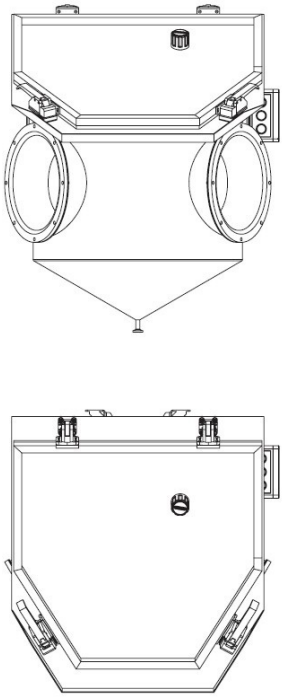


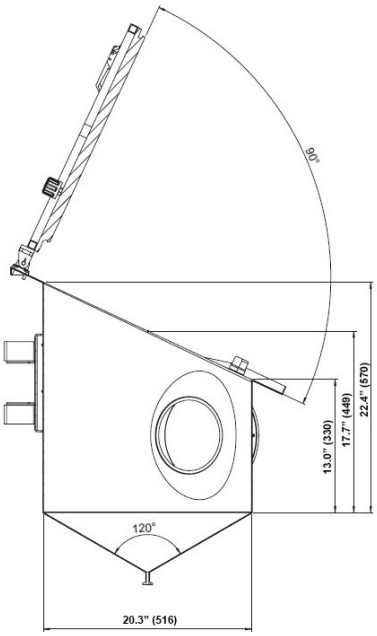
CTU-ES-50xx



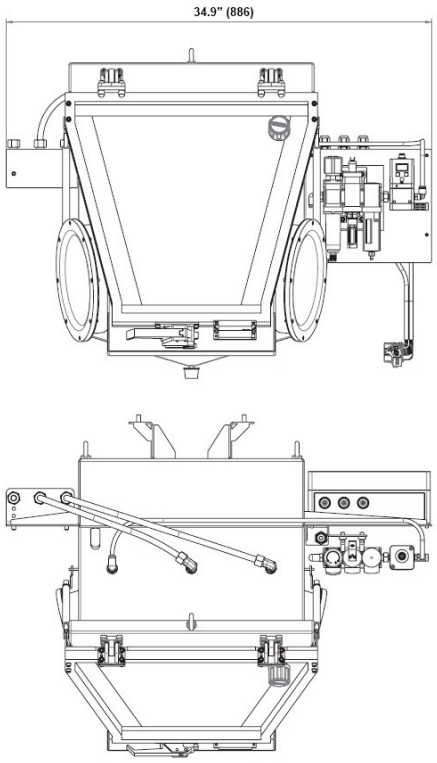
Dimensions key: inches (millimeters)

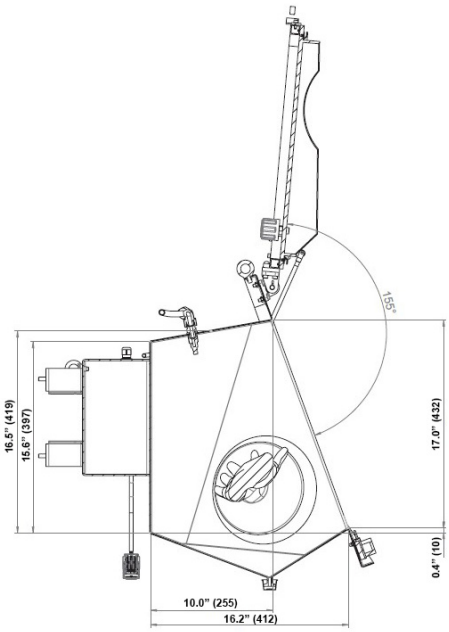
CTU-ES-51xx





CTU-ES-53xx

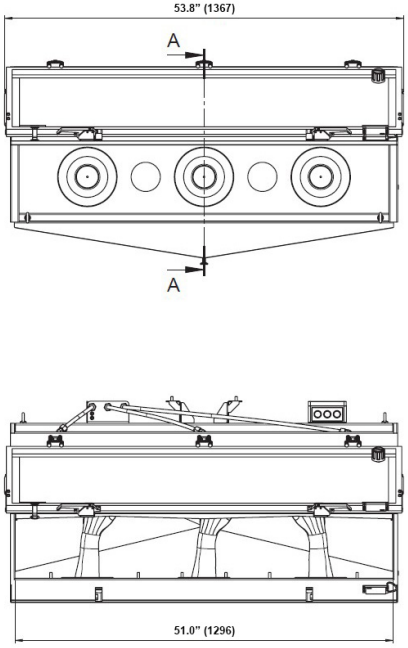


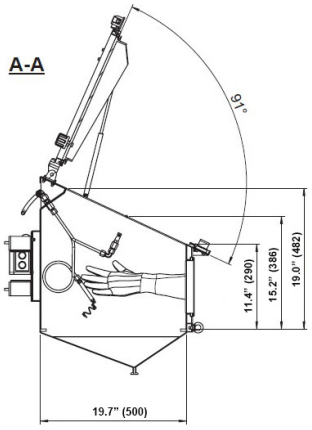


Dimensions key: inches (millimeters)

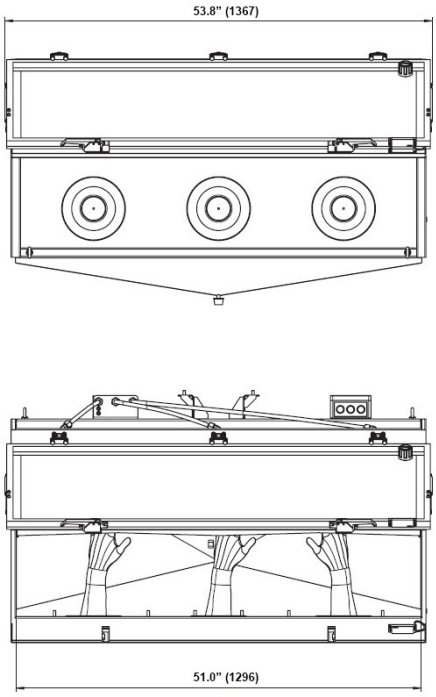
Unit Dimensions

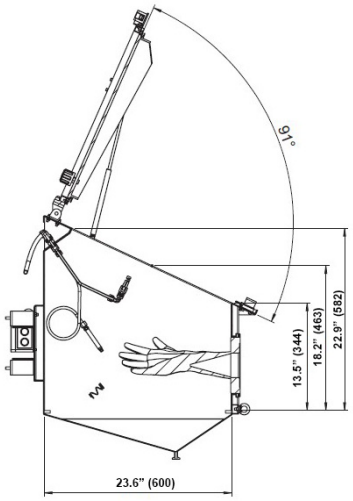
CTU-SC-57xx





CTU-ES-58xx





Dimensions key: inches (millimeters)