



# Technical Documentation

## ACD 1200 MD.46 A32 Ex

Version 001



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## Description of product series

The **ACD 1200 MD.46 A32 Ex** unit is designed to be **free of sources of ignition**. It has an explosion-proof fan in accordance with ATEX Ex II 2G T3 for extraction and filtration of dry, flammable/non-flammable gases and vapors in low concentrations that are not potentially explosive (< 20% of the lower explosion limit) and have a low dust content.

A 2-stage filter system is available for **industrial applications** involving substances with increased requirements in relation to health protection and explosion protection.

In order to make it impossible for gases and vapors that have been concentrated in the filter to ignite, the activated carbon filter elements and downstream components, such as the ATEX compliant fan and the ATEX-compliant motor, are grounded and free of sources of ignition.

The temperature class of the blower is T3. As a result, the maximum surface temperature is 200°C. This means that gases in the temperature classes T1, T2, and T3 with an ignition temperature > 200°C can be safely extracted.

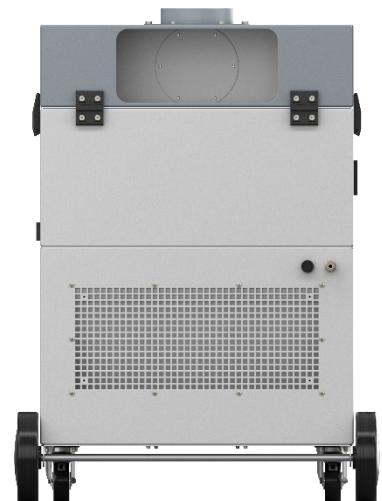
It is not permitted for the ACD 1200 MD.46 A32 Ex unit to be installed or operated in Ex zones.

The harmful and unwanted substances produced in the relevant customer process are collected via a collection element and filtered in the ACD 1200 MD.46 A32 Ex. When the raw gas enters the device, the air impurities in the form of gases and vapors are retained by the activated carbon filter of the filter cassettes (through adsorption processes).

Thanks to the high degree of purification, the filtered clean gas can be directed back into the working space (**recirculated air mode**).

## Features ACD 1200 Ex MD.46 A32 Extraction and Filtration Unit

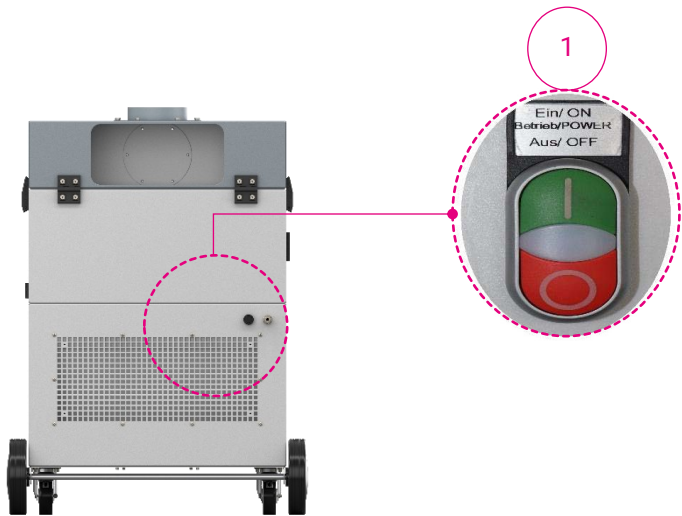
- **Explosion-proof fan** in accordance with ATEX Ex II 2G T3
- Electrically conductive **filter cassettes** with equipotential bonding connection
- With **interchangeable filter system** – for safe removal with minimal contamination risk
- Ready for installation of console brackets and hose connections
- **Low energy consumption** thanks to energy-efficient device electronics
- All electrical components are compliant with CE standards
- Integrated soundproofing ensures extremely **quiet operation**
- Robust sheet steel enclosure with **powder coating**
- **Mobile unit** with casters
- Separate starter box with control elements





# Equipment

Figure 1: Starter box



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**ON/OFF switch**  
Starter box:  
Separate switch box

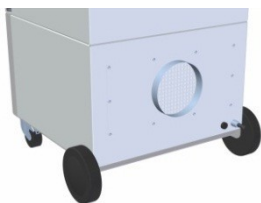


## Technical Data

**Table 1: technical data ACD 1200 MD A32 Ex**

PARAMETER	UNIT	MD.46
Max. volumetric flow rate	m <sup>3</sup> / h	1.700
Max. vacuum	Pa	2.600
Rated operating points	m <sup>3</sup> /h @ Pa	1.000 / 1.800
Protection class	IP	55
Sound level (100% volumetric flow rate)	dB(A)	62
Vacuum generator type		Ventilator
Rated voltage	VAC	3~400
Rated frequency	Hz	50
Rated motor power	kW	1,50
Rated current	A	3,3
ATEX- Vacuum generator type		Ex e II 2 G c T3
Operating hours counter		optional
Air outlet DN 200	(2*)	optional
Dimensions (width x depth x height)	mm	790 x 820 x 1040
Weight	kg	Ca. 180
Air intake versions:	Nozzle Location	1x Ø 150 mm Nozzle Back of the device, top
	Alternative: Nozzle Location	1x Ø 160 mm Nozzle At the top of the device
	Montage location	connector for Flextractor extraction arm Ø160 mm at the top of the device
Air Outlet:	location	Air outlet grille Bottom of the rear back
	Alternative: Nozzle location	1x Ø 200 mm Nozzle Bottom of the rear back
Mains cable EU (CEE)	m	6,0 (Country-specific version selectable)

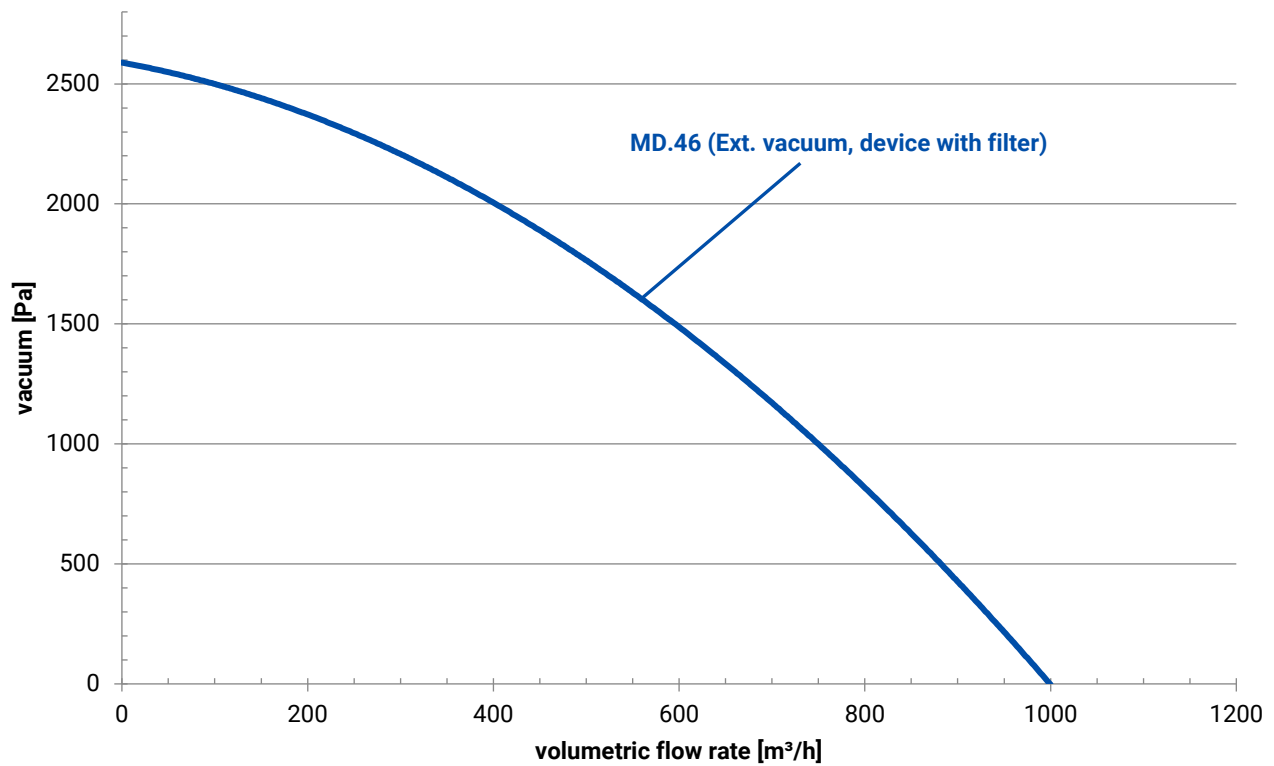
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## Characteristic Curve

Figure 2: characteristic curve ACD MD.46





# ACD Series– Vapors, Odors, and Gases

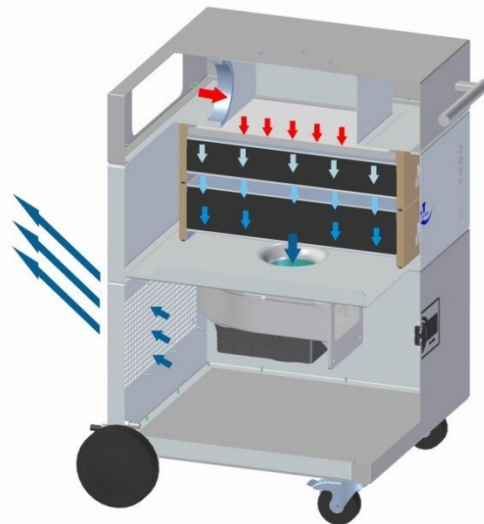
## Areas of application

Gluing | Pre-treatment | Painting / Printing | Cleaning | Laminating | Casting

## Operating principle

The blower installed in the ACD 1200 MD.46 A32 Ex generates negative pressure (vacuum) at the intake nozzle of the connected collection element. As a result, impurities in the air can be collected and sucked out directly at the point of creation.

For safe extraction and filtration of flammable gases, it is necessary for the concentration of the gases that are sucked in to be < 20% of the lower explosion limit (LEL) at all times. This prevents dangerous interactions between the gas and the downstream filters. Details about LELs can be found in the GESTIS Substance Database of the German Social Accident Insurance (DGUV): <https://gestis.dguv.de/> and <https://gestis-database.dguv.de/>. The filter and the housing are integrated in an equipotential bonding system to prevent any electrostatic discharge.



The device is equipped with a two-stage filter system.

When the **raw gas** enters the device, all the present **dust particles** are retained by a filter pad.



The separation (adsorption) of air impurities in the form of **gas or vapor** takes place in the activated carbon fill of the filter cassette. The filtration effect of the activated carbon is based on adsorption, i.e. the process by which (gaseous) substances adhere to the porous surface of the activated carbon. Here, physical adsorption does not involve any chemical changes to the substance being adsorbed.

Thanks to the high degree of purification, the **filtered clean gas** can be directed back into the working space (recirculated air mode). As a result, there are no thermal losses.

Recirculated air mode is not permitted when the equipment is used to extract substances that are carcinogenic, mutagenic, or toxic for reproduction. In these cases, the optional outlet nozzle should be mounted on the outlet side. The filtered clean gas must be directed via a connected pipe section into a central air outlet system.

## Device Variants



Different filter combinations are available for the extraction and filtration of gases, odors, and vapors. The suitability of the filter materials that are available for separating out the impurities depends on the pollutants/harmful substances in question. For competent advice and help choosing the right filter material, please contact your local dealer or contact ULT AG directly via [ult@ult.de](mailto:ult@ult.de).

The devices in the ULT 1200 series can be equipped with the following filter configurations based on the individual customer requirements:

### ACD 1200 MD.46 A32 EX

**Table 2: ACD 1200 MD.46 A32 Ex**

Part number/ complete unit:		1-00015
<b>Filter for organic gases:</b>		
(1) Interchangeable frame with dust pre-filter		
	Filter pad M5 (4-00910)	ISO Coarse > 85% according to ISO 16890
(2) Adsorption filter cassette A16 (4-00877)		
	Filter medium:	Activated carbon fill (16 kg)
(3) Adsorption filter cassette A16 (4-00876)		
	Filter medium:	Activated carbon fill (16 kg)





## Accessory items

### Suction system DN150

hoses



<b>Suction hose DN150,</b> By the meter	Antistatic, without accessories	6-16401
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Hose accessories



spiral hose clamp	145-165 mm	6-06966
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### Suction system DN160

hoses



<b>Suction hose DN160,</b> By the meter	antistatic, without accessories	6-16402
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Hose accessories



spiral hose clamp	155-175 mm	6-06954
End fitting DN160	antistatic	6-07282



## Elements for extraction arm installation and intake nozzles



**swivel, 360°**,  
polyester-coated steel  
black

device assembly,  
Extraction arms,  
Flextractor accessories

CB-SU-160

## Extraction arms



**extraction arm DN160m,**  
**2 meter**  
Resistant to welding fumes, oil  
resistant

with wall bracket,  
without capturing element  
Flextractor accessories

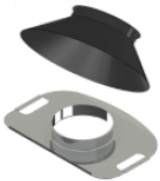
CA2-160-  
BPU-301

**telescopic extraction arm**  
**DN160m**  
**1,2-1,6 Meter**  
Resistant to welding fumes, oil  
resistant

without capturing element  
Flextractor accessories

CT2-160-  
BPU-301

## Collecting elements



Flared hood coated black

Flextractor accessories

CH-160-  
Flared

Flat hood coated

Flextractor accessories

CH-160-Flat

## Extraction arm set Flextraction



Articulated extraction arm  
DN160,  
3m, with slewing ring  
abrasion, chemicals, welding  
fume, oil and temperature  
proof up to 90°C

Flextractor accessories

5-01587



incl.  
flat hood, powder coated



incl.  
flat hood, powder coated



## Elements for extraction arm mounting for EX-applications



360° swivel,  
steel polyester coated  
black

Device mounting  
extraction arm,  
Flextractor accessory

XCB-SU-160

## Extraction arms for EX-applications



**Extraction arm DN160m,  
2 meters**

with wall mounting,  
without collecting element

XCA2-160-  
BPE-322

ATEX certified

Flextractor accessory



**Telescopic arm DN160m,  
1,2-1,6 meters**

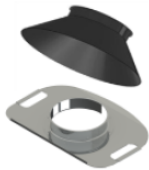
without collecting element

XCT2-160-  
BPE-322

ATEX certified

Flextractor accessory

## Collecting elements for Ex- applications



Flared hood ATEX certified

Flextractor accessory

XCH-160-  
Flared

Flat hood ATEX certified

Flextractor accessory

XCH-160-  
Flat

## Extraction arm set Flextraction ATEX



Articulated extraction arm  
DN160, 3m, with slewing ring,  
ATEX-certified  
Chemicals and temperature  
proof up to 80°C

Flextractor accessoires

5-01588



incl.  
flat hood, powder coated,  
ATEX-certified



incl.  
intake mesh  
ATEX-certified



# DN200 exhaust air system

## Hoses



<b>Suction hose DN200,</b> per meter	antistatic, without accessories	6-16403
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## Hose accesories

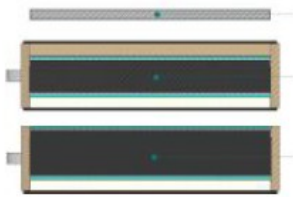


Spiral hose clamp	195-215 mm	6-06955
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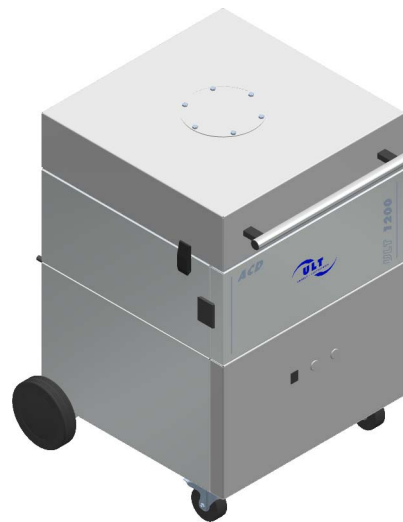
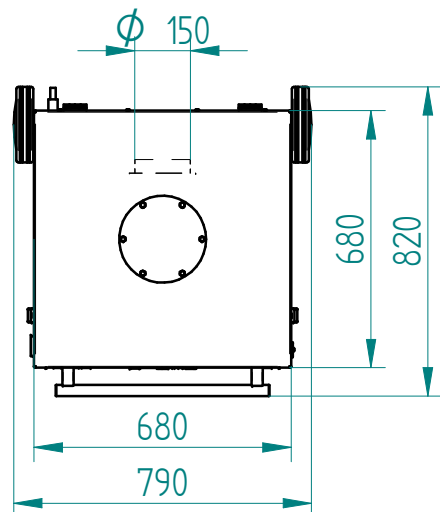
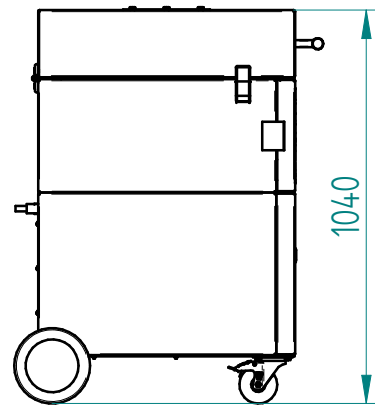
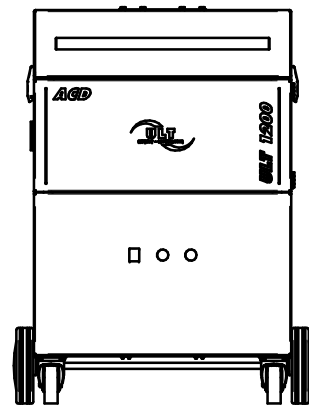
# Replacement filter

ACD



Filter A32		
Filter pad M5		4-00910
Adsorption filter cassette A16 top		4-00877
Adsorption filter cassette A16 bottom		4-00876





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				2014	Datum	Name	
001	Basis	11.02.14	JSacz	Bearb.	11.02.	JSacz	Zeichnungsnummer: ULT 1200_00_134_006
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				Norm			

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