



Collection and disposal of commercial food waste
ACO Waste-Jet – Wet refuse collection system



ACO. The future of drainage.



The ACO system chain provides drainage solutions to meet tomorrow's environmental challenges

The increase in extreme weather conditions requires more complex approaches to water drainage. ACO provides smart system solutions which work in both directions: They protect people from water – and vice versa. Each ACO product within the ACO system chain sends the water in the right direction, with the aim of being able to recycle it in a way that makes sense both ecologically and economically. Within the ACO group it is ACO Haustechnik which supports the overall system chain, and combines system solutions for drainage, separation and pumping in order to create total drainage solutions for buildings.

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collect:
Collect and store

- Floor drainage systems
- Bathroom drainage
- Roof drainage
- Multi-storey parking deck drainage
- Balcony and terrace
- Drainage pipe systems



clean:
Pre-clean and treat

- Grease separators
- Starch separators
- Light oil separators
- Process technology



hold:
Keep away from and hold back

- Backflow systems



release:
Pump, drain and re-use

- Lifting plants
- Pumping stations



The ACO system chain in action



Filling the collection station



Temporary storage in tanks



Emptying into the suction vehicle

Every product from ACO Haustechnik integrates into the ACO system chain

ACO Waste-Jet wet refuse collection system – Collection and disposal of commercial food waste

While metal and plastic waste can be disposed of without problems, kitchen waste has to be stored and disposed of separately. Commercial food waste is normally collected in drums, which need to be stored in cold rooms to avoid smells and rodent infestation. At regular intervals these are then removed by a specialist disposal company.

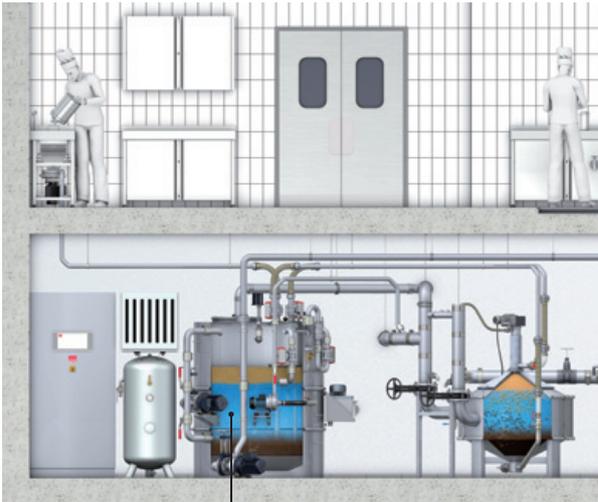
Handling commercial food waste costs time and money. In addition, hygiene concerns definitely apply. By using a system to collect and dispose of commercial food waste the cost can, however, be significantly reduced. ACO wet refuse technology is presented in detail below.

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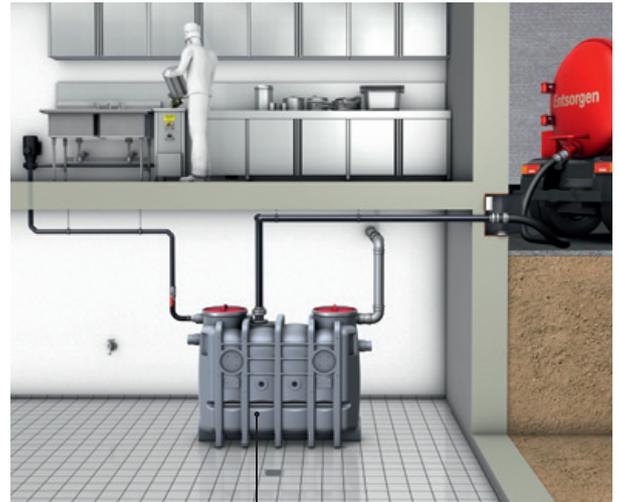
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The ACO system chain at work in the domain of total drainage of commercial kitchens

Disposal



Wet refuse collection system
ACO Waste-Jet Comfort



Wet refuse collection system
ACO Waste-Jet Classic

Kitchen design

Kitchen design is a diverse and complex process. The wastewater has to be collected using drainage channels, floor gullies and pipework systems and then fed into the sewers through grease separators. Special attention needs to be paid to the collection and transmission of food waste. Here ACO can literally offer a one-stop solution.

Kitchen drainage

Whether for renovations or new projects, ACO can offer a complete range based on a modular approach. Depending on the quantity of water falling onto the surface to be drained, and the position of the drainage elements, a combination of box channels, high capacity channels, slot channels and floor gullies are used. The material of choice for floor drainage

in commercial kitchens is stainless steel (material grade 304 or 316). Its main benefits are its smooth surface and its robustness.

Wastewater processing

Kitchen wastewater generally contains grease and so needs to be cleaned. Wastewater which contains grease is a threat to pipes, drainage elements and sewers.

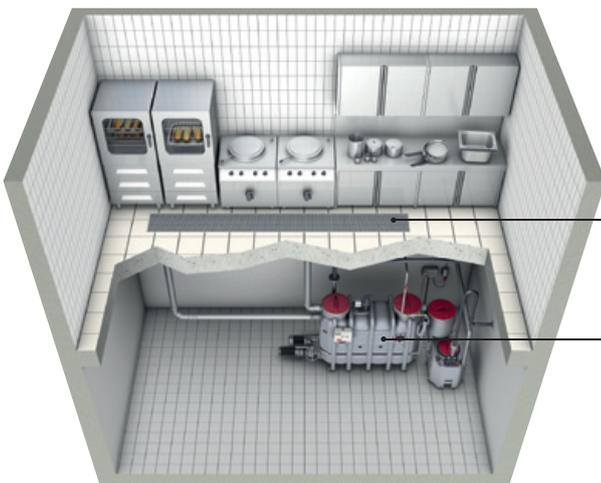
Grease and oils are deposited with other wastewater components on the walls of the pipes and lead to corrosion, blockages and noisome smells. ACO Haustechnik has a wide range of grease separators available, either free-standing or below ground. Free-standing grease separators are one of two kinds: full disposal or partial disposal.

Disposal of food waste

Wherever meals are prepared organic waste is created from the preparation and the consumption of meals. This is normally collected in drums, which need to be stored in cold rooms to avoid smells and rodent infestation. This kind of disposal costs time and money.

By installing an ACO Waste-Jet system, the collection and disposal of commercial food waste is not only dealt with professionally, but also ecologically and hygienically, as the risk of cross-contamination is removed.

Separate



ACO Variant-CR
box channels

ACO Hydrojet Grease
separator connected
to an ACO wastewa-
ter Multi-Mini duo
lifting plant

Our Brochure “Grease separators”

Any business which creates wastewater is required by law to ensure that any substances and fluids which could create blockages or smells do not reach the public sewerage system. In order to ensure that organic fats and oils are held back as required, grease separators are used in kitchens, meat-processing businesses and a very wide variety of foodstuff producers.

Storage and processing



ACO Variant-CR
box channels

ACO Variant-CR
high-capacity channels

ACO Variant-CR
floor gullies

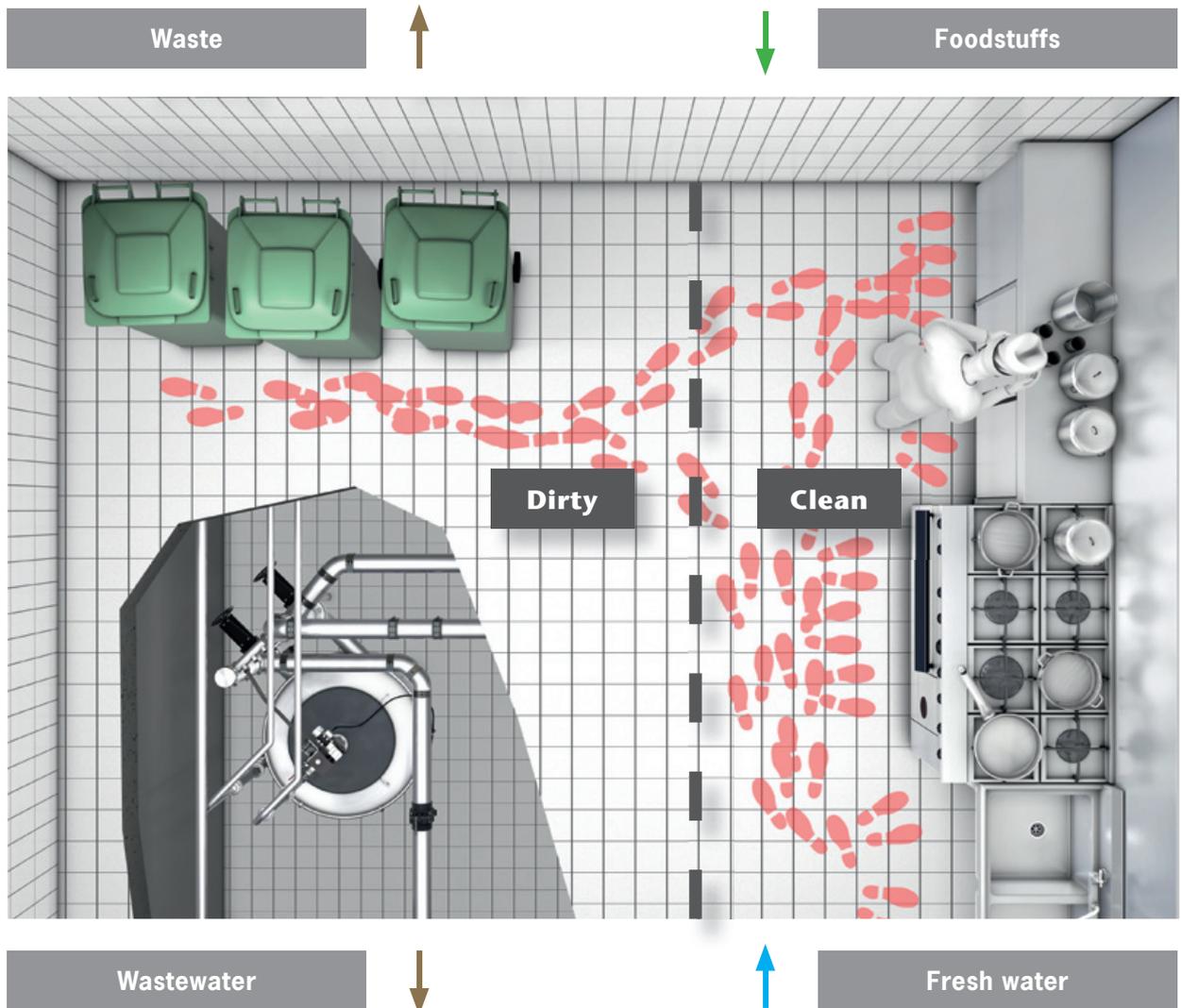
ACO Variant-CR
slot channels

Our Brochure “Stainless steel floor gullies and channels”

Wastewater drops onto the floor during the storage and preparation of foodstuffs. In a commercial area this must always be drained off through hygienically impeccable drainage systems. For this, generally floor gullies, box channels, high-capacity channels and slot channels made from stainless steel are used. Depending on the type of application there are various different gratings available.



Traditional waste disposal in commercial kitchens using bins and wet waste coolers



The use of normal waste buckets and bins to store and dispose of kitchen waste of animal and plant origin (wet waste) carries with it a significant risk to the problem-free and responsible management of a commercial kitchen.

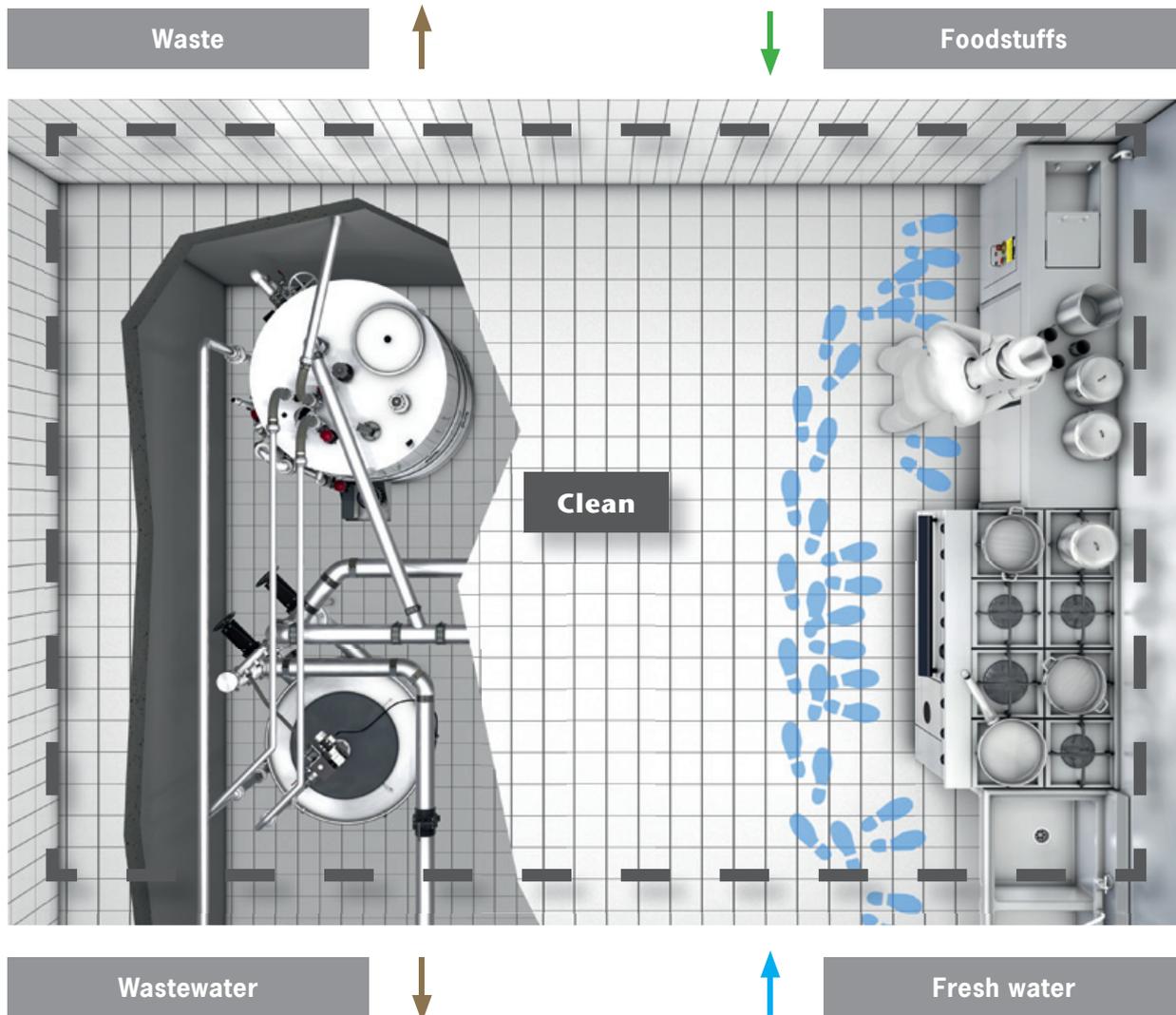
For example, when carrying the waste bin with the wet waste out of the clean area to the organic waste collection bins in the unclean area there is a risk of cross contamination, because this offers micro organisms a route into preparation areas in the kitchen.

In order to avoid unpleasant odours from the organic waste collection bins these then need to be stored, with the attendant energy costs, in chilled rooms until they are disposed of by an expert company.

Some degree of chilling of kitchen waste also needs to be applied for temporary storage in wet waste cool boxes.

Modern refuse management using

ACO Waste-jet wet refuse collection systems



The use of the ACO Waste-Jet wet refuse collection system creates a closed hygiene chain from the point of origin of the kitchen wastes to disposal by a specialist company.

The kitchen waste is transported from its point of origin via a collection station directly into a tank.

So no waste bins need to be provided in the kitchen, meaning that cross-contamination during their removal from the clean area is eliminated.

As the tanks used in the ACO Waste-Jet wet refuse collection systems are sealed and odour-proof containers, no further chilling of the wet waste is required. In addition, these benefits also mean that the time lapse between each emptying of the tank is considerably longer when compared to the use of organic waste collection bins.

How the ACO Waste-Jet wet refuse collection system works



Input

Kitchen waste of animal or plant origin (wet refuse) that is created during the preparation of meals or when clearing away dishes, is removed through a collection station right where it is created in the kitchen, or next to the dishwasher.

- Free-standing or built into the worktop
- Fully automatic operation



Shredding and transporting

With added water, the food waste is finely shredded and prepared to be moved on into the tank. The drawing off of the wet waste from the collection station is done by either a pneumatic pressure system or a feed pump, depending which system you select.

- Effective shredding and homogenising
- Integrated safety mechanisms



Temporary storage

The wet waste is stored in the collection tank until the tank's maximum storage capacity is reached. The fact that the tank is full is displayed visually at the collection station.

- Flexible, odour-proof tank system
- Compact construction without pressure, easy to install



Disposal

The contents of the tank are pumped directly into a disposal vehicle via a draw-off connection. Then the system is ready to use once again.

- High pressure internal cleaning for odourless cleaning of the container.
- Feed pump for reliable disposal over lengthy pipes.



Product overview

Wet refuse collection systems



Tank

The tanks for temporary storage in the ACO Waste-Jet system may be made from either stainless steel (grade 304) or plastic (polyethylene).

Depending on the application and the selected material, the tanks come in different sizes and versions (high-pressure internal cleaning, disposal pump etc.).

The fill-level monitoring is done using monitoring systems which are integrated in the tank. All containers are sealed to be odour-free and have inspection hatches for maintenance.

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Collection station

In the ACO Waste-Jet system the tanks are filled using collection stations.

These collection stations can, depending on requirements, be installed free-standing in the kitchen and next to dishwashers, or can be built into work-surfaces.

The collection stations for the Waste-Jet Comfort system transfer the wet waste to the tank using a vacuum system, while the Waste-Jet Classic system uses feed pumps. When the tank is full this is displayed visually at the collection station.

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ACO Waste-Jet Comfort type 3

Product information

ACO Product benefits

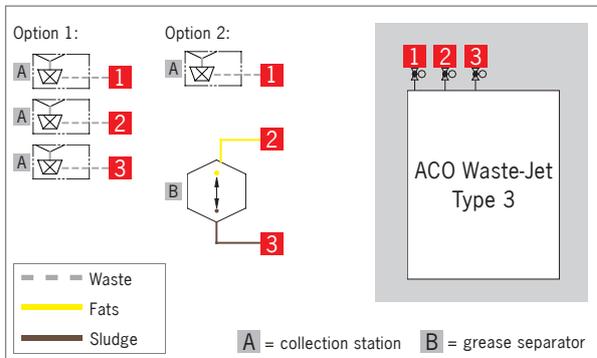
- Hygienic collection and disposal
 - No need for cold storage
 - No interim storage in drums is necessary
- modular construction
 - Takes up little space
 - Easy to transport and mount
- Hydro-mechanical high-pressure cleaning at 175 bar
 - Only cold-water feed needed
 - Built-in automatic sludge liquor draining
 - Reduced volumes to dispose of
- Integrated disposal pump
 - Pressure and vacuum operation

- Food waste collection tank for connection to ACO Waste-Jet collection station and/or ACO Grease separator, compliant with DIN EN 1825/DIN 4040-100 for NS 2 – 25
- Completely sealed odour-proof installation
- Fully automatic controls
- Incident warnings using volt free contacts

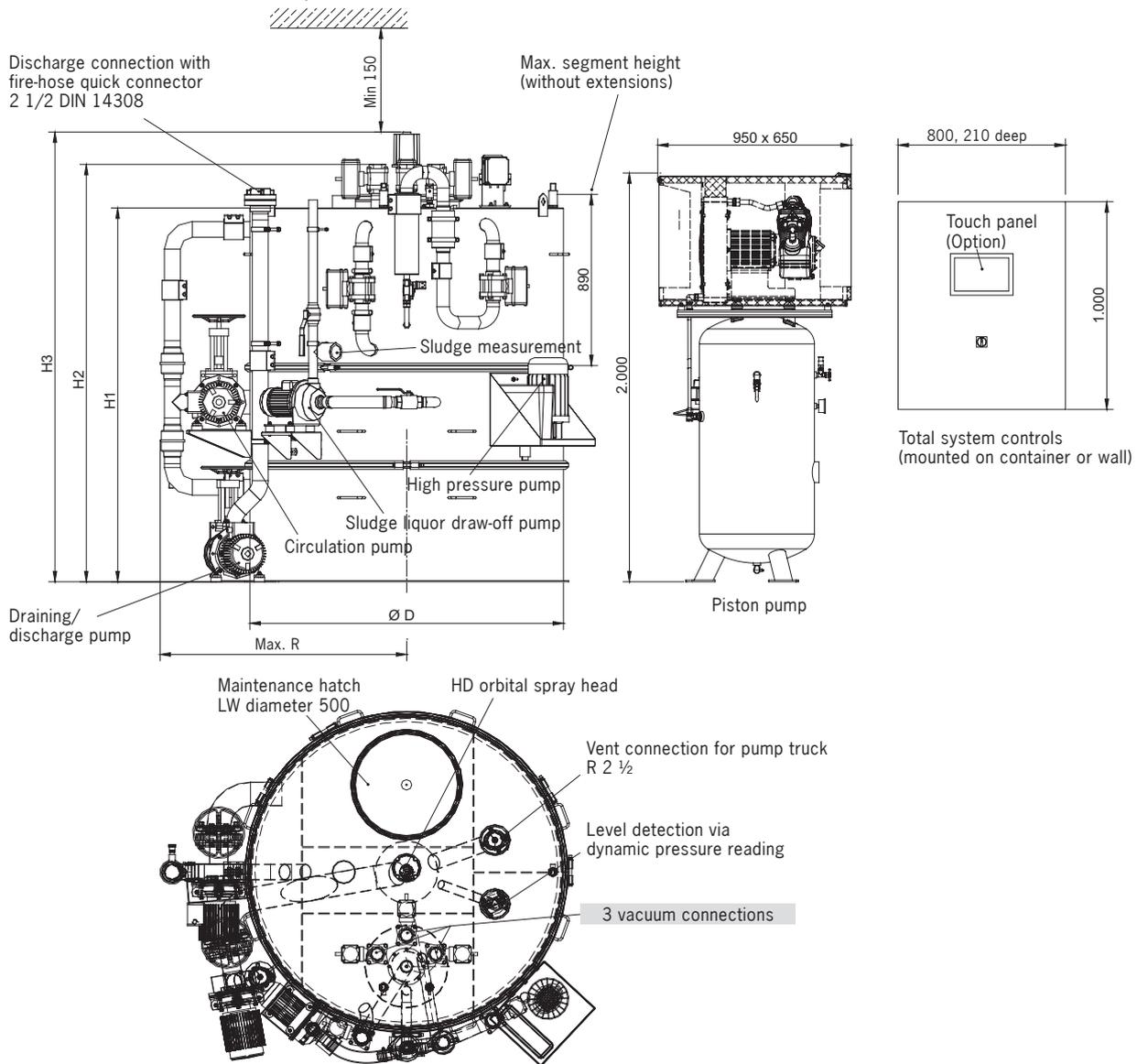
- Optionally with
 - Total system control via a touch panel
 - Remote diagnosis
 - Connection to building control system/central technical supervision
- 3 vacuum connections
 - Pneumatic valve DN 50
 - vacuum created using ejector
- Stainless steel, material grade 316
- For installation in frost-free environment
- Emptying connection, fire hose quick coupling B 2½"
- Disposal pump
- Hydro-mechanical high pressure internal cleaning
 - Nominal pressure: 175 bar
 - capacity: 13 l/min
 - circulation pump
 - 20 m³/h bei 1 bar
 - Sludge measurement
 - sludge liquor draw-off pump
 - 12 m³/h at 0.5 bar
 - 1-stage piston compressor
 - Pressure container: 250 l
 - suction volume: 660 l/min
 - motor power: 3 kW
- Electrical connection for total system controls



Possible arrangements for low-pressure connectors (1-3)



Dimensions Type 3



Product parameter Type 3

ACO Waste-Jet	Useful volume [l]	Dimensions					Weight Type 3	
		Diam [mm]	R [mm]	H1 [mm]	H2 [mm]	H3 [mm]	empty [kg]	full [kg]
Type 3	2.500	1.500	1.250	1.800	2.000	2.200	580	3.080
	3.300	1.500	1.250	2.100	2.300	2.500	650	3.950
	4.400	1.750	1.400	2.300	2.500	2.700	690	5.100
	6.000	1.750	1.400	3.000	3.200	3.400	760	6.750

Order information Type 3

ACO Waste-Jet	Included in product	Useful volume [l]	Suitable for grease separator NS ...			Art. no.
Type 3	Manual switch	2.500	2	To	4	7950.00.00
		3.300	5,5	To	8,5	7950.00.01
		4.400	10	To	15	7950.00.02
		6.000	20	To	25	7950.00.03
	Touch panel	2.500	2	To	4	7950.01.00
		3.300	5,5	To	8,5	7950.01.01
		4.400	10	To	15	7950.01.02
		6.000	20	To	25	7950.01.03

ACO Waste-Jet Comfort type 6

Product information

ACO Product benefits

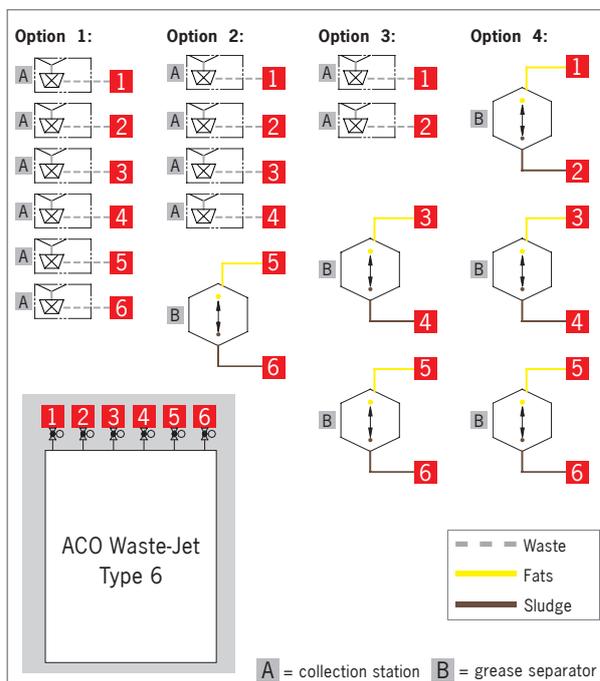
- Hygienic collection and disposal
 - No need for cold storage
 - No interim storage in drums is necessary
- modular construction
 - Takes up little space
 - Easy to transport and mount
- Hydro-mechanical high-pressure cleaning at 175 bar
 - Only cold-water feed needed
 - Built-in automatic sludge liquor draining
 - Reduced volumes to dispose of
- Integrated disposal pump
 - Pressure and vacuum operation

- Wet waste collection tank for connection to ACO Waste-Jet collection station and/or ACO Grease separator, compliant with DIN EN 1825/ DIN 4040-100 for NS 2 – 25
- Completely sealed odour-proof installation
- Fully automatic controls
- Incident warnings using volt free contacts

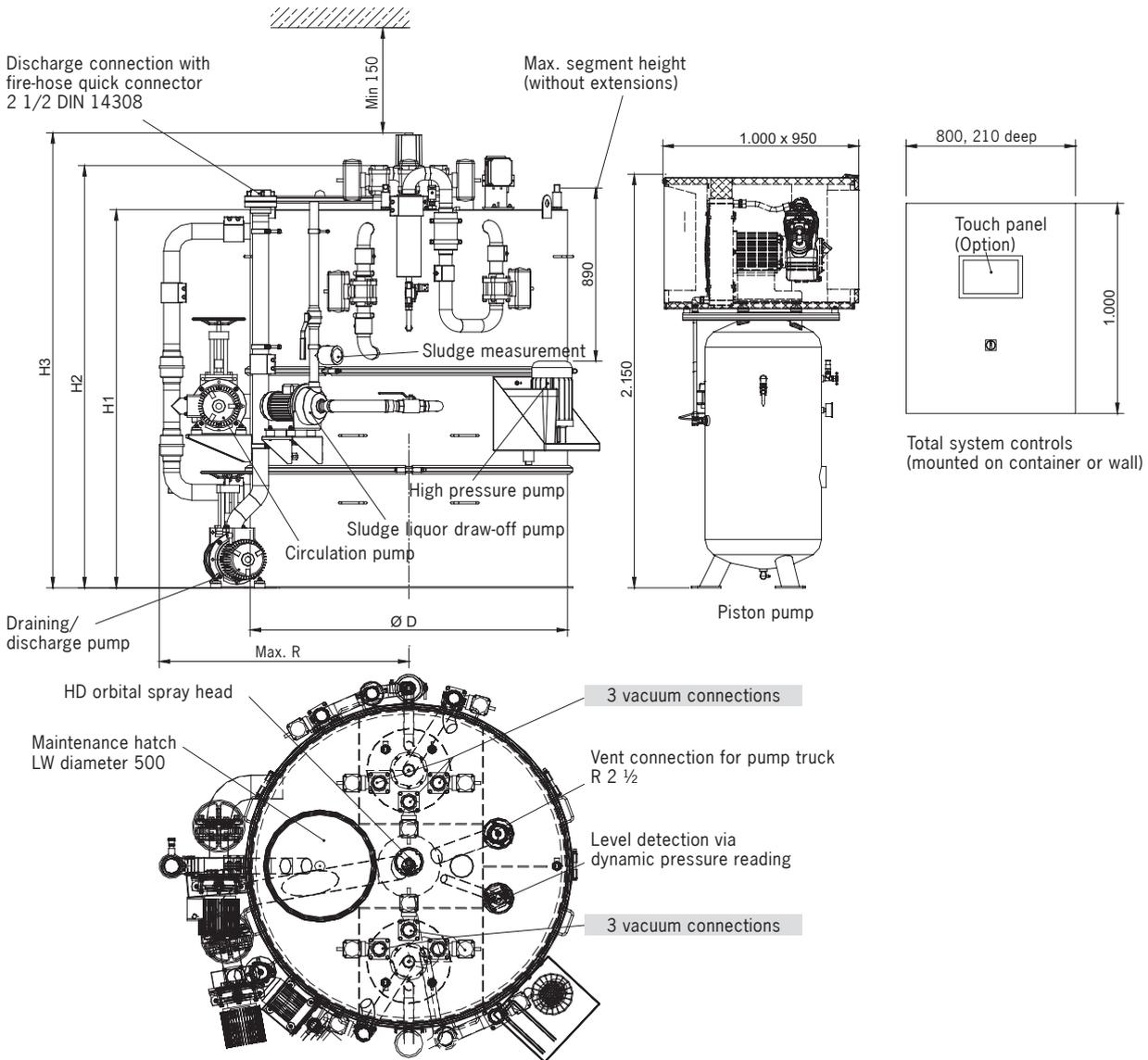
- Optionally with
 - Total system control via a touch panel
 - Remote diagnosis
 - Connection to building control system/central technical supervision
- 6 vacuum connections
 - Pneumatic valve DN 50
 - vacuum created using ejector
- Stainless steel, material grade 316
- For installation in frost-free environment
- Emptying connection, fire hose quick coupling B 2½"
- Disposal pump
 - 20 m³/hr at 1 bar
- Hydro-mechanical high pressure internal cleaning
 - Nominal pressure: 175 bar
 - capacity: 13 l/min
- circulation pump
 - 20 m³/hr at 1 bar
- Sludge measurement
 - sludge liquor draw-off pump
 - 12 m³/hr at 0.5 bar
- 2-stage piston compressor
- Pressure container: 500 l
- suction volume: 750 l/min
- motor power: 5.5 kW
- Electrical connection for total system controls



Possible arrangements for low-pressure connectors (1–6)



Dimensions Type 6



Product parameter Type 6

ACO Waste-Jet	Useful volume [l]	Diam [mm]	R [mm]	Dimensions			Weight Type 6	
				H1 [mm]	H2 [mm]	H3 [mm]	empty [kg]	full [kg]
Type 6	2.500	1.500	1.250	1.800	2.000	2.200	670	3.150
	3.300	1.500	1.250	2.100	2.300	2.500	690	3.990
	4.400	1.750	1.400	2.300	2.500	2.700	800	5.200
	6.000	1.750	1.400	3.000	3.200	3.400	880	6.880

Order information Type 6

ACO Waste-Jet	Included in product	Useful volume [l]	Suitable for grease separator NS ...			Art. no.
Type 6	Manual switch	2.500	2	To	4	7950.02.00
		3.300	5,5	To	8,5	7950.02.01
		4.400	10	To	15	7950.02.02
		6.000	20	To	25	7950.02.03
	Touch panel	2.500	2	To	4	7950.03.00
		3.300	5,5	To	8,5	7950.03.01
		4.400	10	To	15	7950.03.02
		6.000	20	To	25	7950.03.03

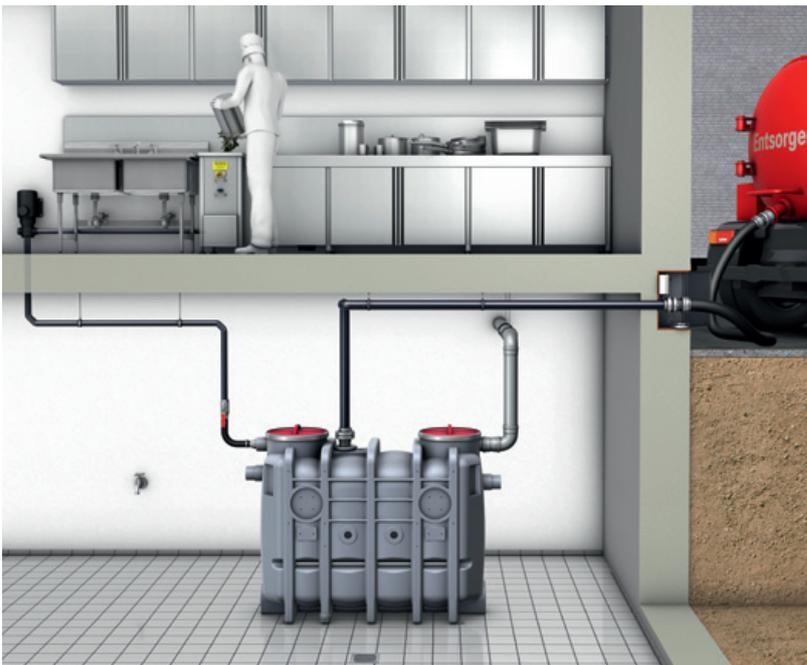
ACO Waste-Jet OD Classic

Polyethylene wet waste collection tank

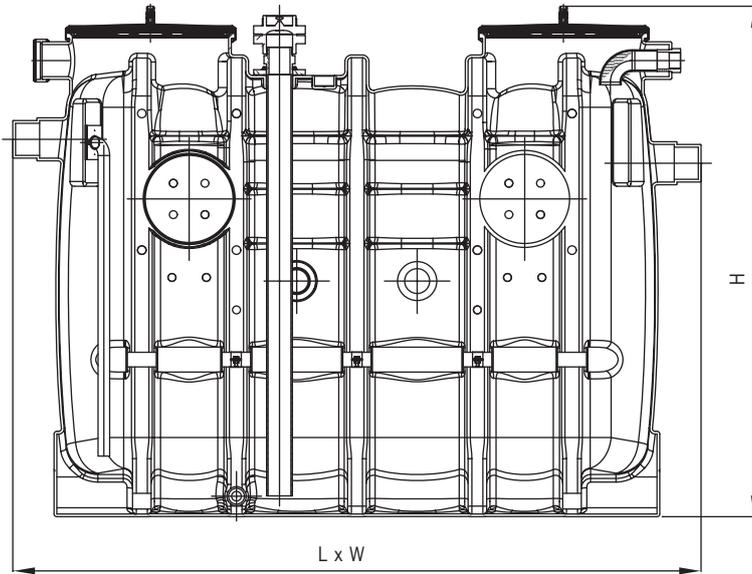
Product information

ACO Product benefits

- Hygienic collection and disposal
- No need for cold storage
- No interim storage in drums is necessary
- Compact installation
- Structural stability with proof of stability for over 25 years
- DN 65 drainage connector for direct pumping
- Rinsing by opening the cover
- For installation in frost-free environment
- Polyethylene collection tank
- DN 40 connection option for connection to collection station
- Fill level monitoring
- DN 100 ventilation connection
- Two maintenance hatches 450 mm diameter sealed with tension ring against odours



**Dimensions of base model
with direct draw-off**

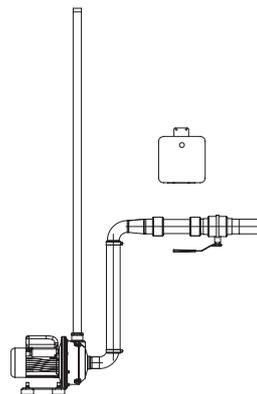


Order information ACO Waste-Jet OD Classic

ACO Waste-Jet Classic	Useful volume [l]	Dimensions			Weight		Art. no.
		L [mm]	W [mm]	H [mm]	empty [kg]	full [kg]	
OD 1	830	2.000	700	1.700	100	930	7950.10.00
OD 2	2.000	2.690	950	1.850	226	2.226	7950.11.00

Sludge liquor draw-off for Waste-Jet Classic

- To make optimum use of the capacity of Waste-Jet Classic's tank volume
- Sludge liquor draw-off takes place in the ACO grease separator
- Including fixings and connectors
- With controls and centrifugal pump 0.37 kW, 230 V/50 Hz



Product Description	Art. no.
Sludge liquor draw-off for ACO Grease separator DN 100, 150 or 200	0155.09.84
Connection set (T-junction and pipe connector) for connection to DN 100 grease separator	0155.03.53 x 1 0150.24.92 x 2
Connection set (T-junction and pipe connector) for connection to DN 150 grease separator	0155.03.54 x 1 0150.24.93 x 2
Connection set (T-junction and pipe connector) for connection to DN 200 grease separator	0155.03.55 x 1 0150.24.94 x 2

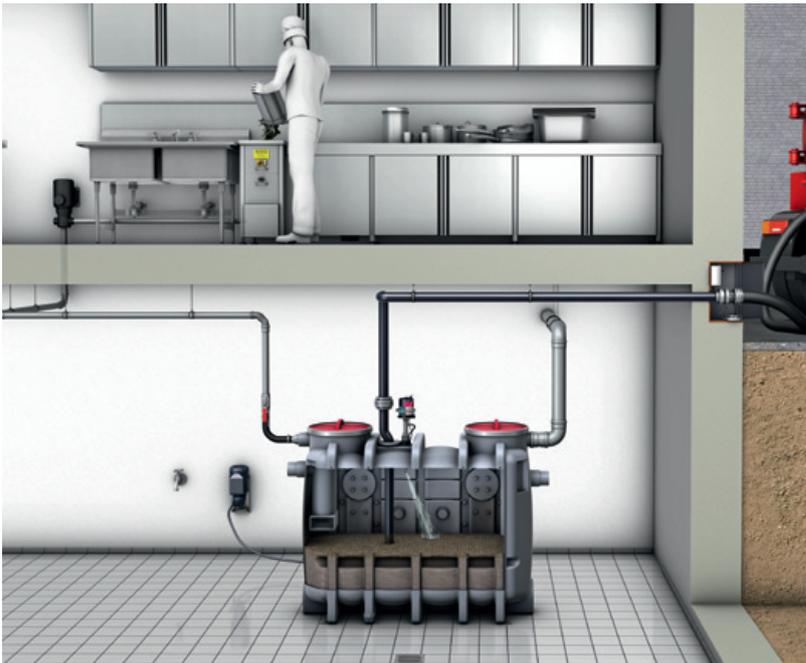
ACO Waste-Jet OA Classic

Polyethylene wet waste collection tank

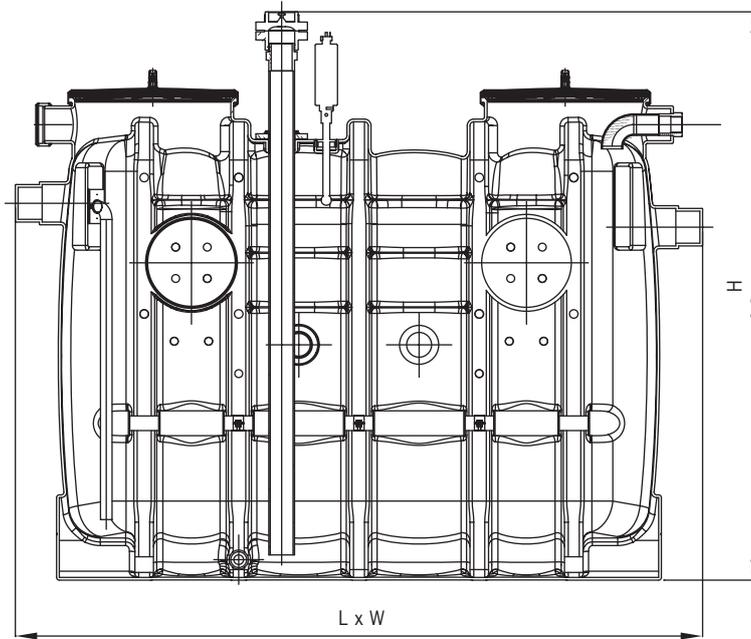
Product information

ACO Product benefits

- Hygienic collection and disposal
 - No need for cold storage
 - No interim storage in drums is necessary
 - Compact installation
 - Structural stability with proof of stability for over 25 years
 - Fully automated hydro-mechanical high pressure internal cleaning for disposal and cleaning using a cold-water connection
 - High-pressure unit and wall-mounted controls
- DN 65 drainage connector for direct pumping
 - 400 V/50 Hz/17 A/3.9 kW electrical connection
 - For installation in frost-free environment
 - Polyethylene collection tank
 - DN 40 connection option for connection to collection station
 - Fill level monitoring
 - DN 100 ventilation connection
 - Two maintenance hatches 450 mm diameter sealed with tension ring against odours



**Dimensions of extension level 1
with direct draw-off and high pressure internal cleaning**

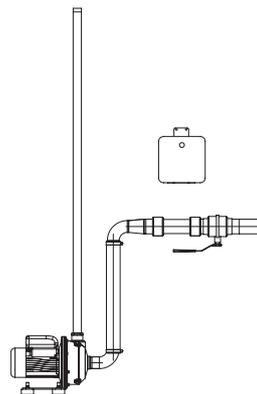


Order information ACO Waste-Jet OA Classic

ACO Waste-Jet Classic	Useful volume [l]	Dimensions			Weight		Art. no.
		L [mm]	W [mm]	H [mm]	empty [kg]	full [kg]	
OA 1	830	2.060	700	1.700	135	965	7950.10.01
OA 2	2.000	2.750	950	1.850	252	2.252	7950.11.01

Sludge liquor draw-off for Waste-Jet Classic

- To make optimum use of the capacity of Waste-Jet Classic's tank volume
- Sludge liquor draw-off takes place in the ACO grease separator
- Including fixings and connectors
- With controls and centrifugal pump 0.37 kW, 230 V/50 Hz



Product Description	Art. no.
Sludge liquor draw-off for ACO Grease separator DN 100, 150 or 200	0155.09.84
Connection set (T-junction and pipe connector) for connection to DN 100 grease separator	0155.03.53 x 1 0150.24.92 x 2
Connection set (T-junction and pipe connector) for connection to DN 150 grease separator	0155.03.54 x 1 0150.24.93 x 2
Connection set (T-junction and pipe connector) for connection to DN 200 grease separator	0155.03.55 x 1 0150.24.94 x 2

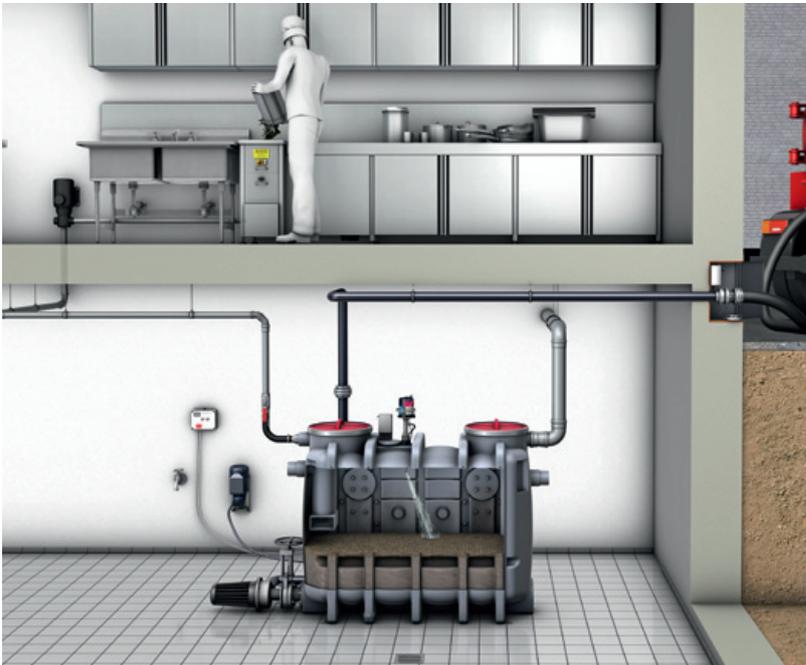
ACO Waste-Jet OAE Classic

Polyethylene wet waste collection tank

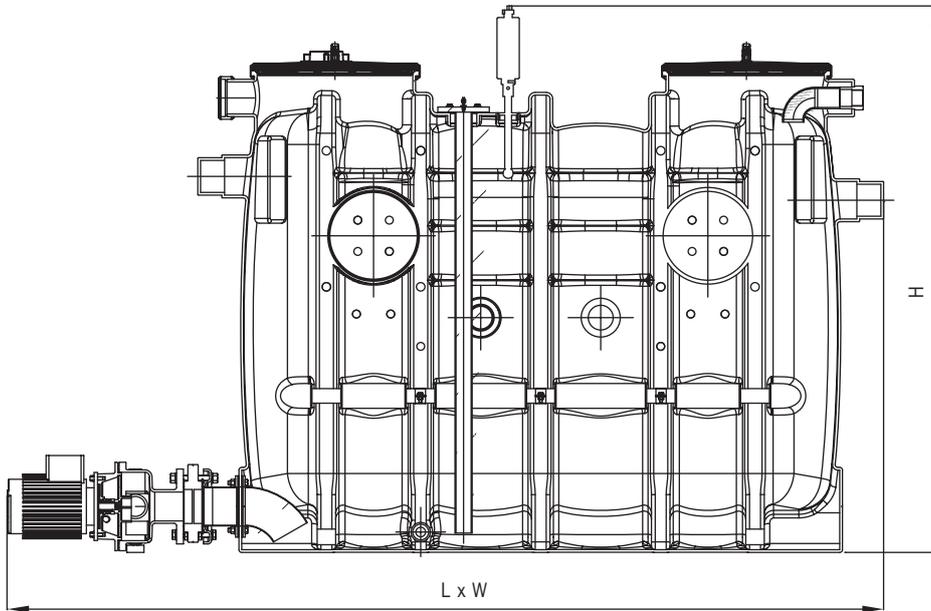
Product information

ACO Product benefits

- Hygienic collection and disposal
 - No need for cold storage
 - No interim storage in drums is necessary
 - Compact installation
 - Structural stability with proof of stability for over 25 years
 - Fully automated hydro-mechanical high pressure internal cleaning for disposal and cleaning using a cold-water connection
 - Automatic drainage pump, motor power: 3.0 kW/2850 rpm – delivery performance: 20 m³/h at 1 bar medium delivery head
- DN 65 drainage connector for direct pumping
 - High-pressure unit and wall-mounted controls
 - 400 V/50 Hz/17 A/6.9 kW electrical connection
 - DN 65 drainage connector for direct pumping
 - Rinsing by opening the cover
 - For installation in frost-free environment
 - Polyethylene collection tank
 - DN 40 connection option for connection to collection station
 - Fill level monitoring
 - DN 100 ventilation connection
 - Two maintenance hatches 450 mm diameter sealed with tension ring against odours



**Dimensions of extension level 2
with drainage pump and high pressure internal cleaning**

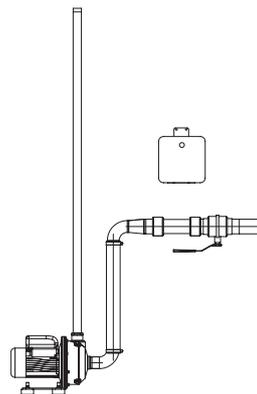


Order information ACO Waste-Jet OAE Classic

ACO Waste-Jet Classic	Useful volume [l]	Dimensions			Weight		Art. no.
		L [mm]	W [mm]	H [mm]	empty [kg]	full [kg]	
OAE 1	830	2.460	930	1.650	210	1.040	7950.10.02
OAE 1	2.000	3.150	1.180	1.850	337	2.337	7950.11.02

Sludge liquor draw-off for Waste-Jet Classic

- To make optimum use of the capacity of Waste-Jet Classic's tank volume
- Sludge liquor draw-off takes place in the ACO grease separator
- Including fixings and connectors
- With controls and centrifugal pump 0.37 kW, 230 V/50 Hz

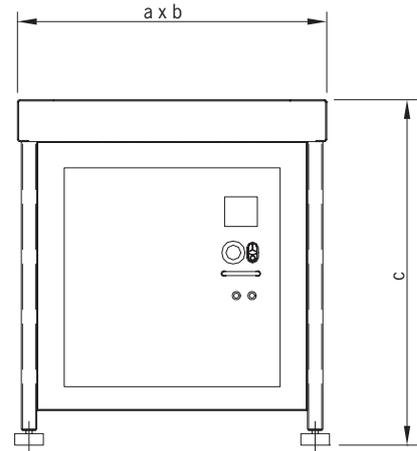


Product Description	Art. no.
Sludge liquor draw-off for ACO Grease separator DN 100, 150 or 200	0155.09.84
Connection set (T-junction and pipe connector) for connection to DN 100 grease separator	0155.03.53 x 1 0150.24.92 x 2
Connection set (T-junction and pipe connector) for connection to DN 150 grease separator	0155.03.54 x 1 0150.24.93 x 2
Connection set (T-junction and pipe connector) for connection to DN 200 grease separator	0155.03.55 x 1 0150.24.94 x 2

Collection station for ACO Waste-Jet Comfort

Separate collection station

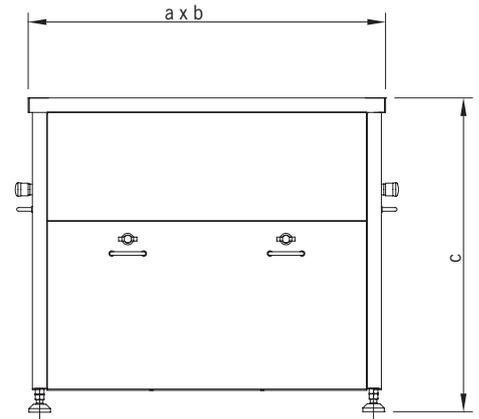
- Free-standing installation in the kitchen
- Shredding and homogenising
- Fill level detection
- Rinsing nozzles in the collection funnel
- Hand spray for manual cleaning
- Hot and cold water connections R 3/4"
- Automatic controls
- Electrical connection 400 V;
50 Hz/1.5 – 2.2 kW
- IP 55 protection



Type	Useful volume [l]	Dimensions			Grinder performance [kW]	Through-put [kg/min]	Weight		Art. no.
		a [mm]	b [mm]	c [mm]			empty [kg]	full [kg]	
F5	20	600	400	910	1,5	10-15	150	170	0150.33.94
F12	20	750	700	890	2,2	15-20	160	180	0150.33.95
F25	50	1.200	500	910	2,2	15-20	180	230	0150.33.96

Separate collection station for dishwasher

- For fitting in the dishwashing line or upstream of commercial dishwashers
- Shredding and homogenising
- Fill level detection
- Rinsing nozzles in the collection funnel
- Hot and cold water connections R 3/4"
- Automatic controls
- Electrical connection 400 V; 50 Hz/1.5 kW
- IP 55 protection



Type	Useful volume [l]	Dimensions			Grinder performance [kW]	Through-put [kg/min]	Controls	Weight		Art. no.
		a [mm]	b [mm]	c [mm]				empty [kg]	full [kg]	
S1	20	980	360	870	1,5	15-20	1x lengthwise	142	165	0150.44.56
S2	20	980	360	870	1,5	15-20	2x lengthwise	142	165	0150.44.57

Collection station for ACO Waste-Jet Classic

Separate collection station

- Stainless steel, (grade 304)
- Free-standing construction in frost-free areas
- Useful volume 20 litres
- Shredding and homogenising, power: 1.5 kW (throughput: 10 kg/min.)
- With separate feed pump for wall mounting, DN 40 pressure connection
- maximum length of pipe between feed pump and tank: 15 m
- maximum length of pipe between feed pump and tank: 50 m
- Fill level detection
- Rinsing nozzles in the collection funnel
- Hand spray for manual cleaning
- R ¾" hot and cold water connections including mixer valve
- Automatic controls
- Electrical connection 400 V; 50 Hz/1.5 – 2.2 kW
- IP 55 protection
- Control on the front



Type	Useful volume [l]	Dimensions			Grinder performance [kW]	Throughput [kg/min]	Weight		Art. no.
		a [mm]	b [mm]	c [mm]			empty [kg]	full [kg]	
F5 with pump	20	600	400	910	1,5	10–15	150	170	0150.45.74

Separate collection station for dishwasher

- Stainless steel, (grade 304)
- Free-standing construction in frost-free areas
- Useful volume 20 litres
- Shredding and homogenising, power: 1.5 kW (throughput: 10 kg/min.)
- With separate feed pump for wall mounting, DN 40 pressure connection
- maximum length of pipe between feed pump and tank: 15 m
- maximum length of pipe between feed pump and tank: 50 m
- Rinsing nozzles in the collection funnel
- R ¾" hot and cold water connections including mixer valve
- Automatic controls
- Electrical connection 400 V; 50 Hz/1.5–2.2 kW
- IP 55 protection
- Controls on both ends



Type	Useful volume [l]	Dimensions			Grinder performance [kW]	Throughput [kg/min]	Controls	Weight		Art. no.
		a [mm]	b [mm]	c [mm]				empty [kg]	full [kg]	
S2 with pump	20	980	360	870	1,5	15–20	2x lengthwise	142	165	0150.45.75

Accessories for ACO Waste-Jet Classic

Illustration	Product Description	Version	Art. no.
	Remote control <ul style="list-style-type: none"> ■ To be fitted on site with a connection box ■ Control line: 7 x 1.0 mm² (on-site) ■ IP 54 protection 	Extension stage 3 Extension stage 3E	0150.45.78 0150.45.79
	Connection box <ul style="list-style-type: none"> ■ For evacuation connection and remote control ■ Stainless steel, (grade 304) ■ Fixing: „On wall“ ■ Width x Depth x Height 500 x 160 x 500 mm 		7601.80.20
	Flush frame <ul style="list-style-type: none"> ■ For connection box 7601.80.20 ■ Width x Depth x Height 565 x 15 x 565 mm 		7601.80.21

