



**ACO Cast and ductile iron products**

*to suit all applications, load classes and sizes*

- Manhole and access covers
- Single- and multi-part covers
- Catch basin covers and kerb gully
- Bridge drains
- Channel frames with gratings



# ACO. creating the future of drainage.



## The ACO system chain provides the drainage solutions for tomorrow's environmental conditions.

Increasingly extreme weather must be counteracted by more complex and sophisticated drainage concepts. ACO achieves this with intelligent system solutions which have a dual purpose: protecting people from water, and water from

people. Every ACO product within the ACO system chain therefore safely controls the water as it passes along the chain to ensure that it can be ecologically and economically reused in a viable way.

[www.aco.ae](http://www.aco.ae)

## ACO Systems FZE - The ACO Headquarter for the Middle East Region



ACO Systems FZE in Dubai, United Arab Emirates



Warehouse and manufacture facility in the Jebel Ali Free Zone Dubai



**ACO is one of the world leaders in the design and manufacture of grey cast iron and ductile iron products**

Established in 1946, the ACO Group has manufactured products for the construction industry for over 50 years and operates on a global basis through its subsidiaries and manufacturing facilities. ACO is an acknowledged innovator in products manufactured from ductile iron, polymer concrete and other corrosion resistant materials. ACO employs more than 3,500 people in 40 countries, has sales in excess of \$610 million and 31 production sites in thirteen countries.

**Cast iron**

Grey cast iron is an alloy mainly consisting of iron, carbon and silicon. It is made by re-melting pig iron, scrap iron or scrap steel at a melting temperature usually ranging from 1.150 to 1.200 °C. Depending on the application, carbon and silicon content is from 2 to 3.5% and 1 to 3% respectively. Other alloying elements are then added to the melt before poured into moulds to produce castings.

**Ductile iron**

Ductile Iron is a cast iron alloy in which the graphite is in the form of spherical nodules rather than flakes as in grey cast iron. The formation of nodules is achieved by addition of nodulizing elements, most commonly magnesium, into the melt and allows the carbon to separate as spheroidal particles as the material solidifies.

**Standardization**

The official standards - design and test principles as well as dimensional standards - form the basis of development and design in drainage technology. Gully tops, bridge drains, gratings and manhole covers are part of traffic surfaces. It follows that traffic safety calls for rules, which have to be complied with by drainage components wherever they are fitted. Here, not only the static, but equally the dynamic load is of importance, based on the magnitude and number of load changes as a result of traffic stresses. The performance requirements determine the design. Gully tops, bridge drains, gratings and manhole covers are safe from the traffic aspect, provided they fulfil fully standard conformity and conform to defined design features. These are, among others, execution of contact surfaces, the frame bearing area and weight (mass) and a traffic-safe fixing locking device to secure cover/grating in frames.

Decades of knowhow and experience are reflected by the according standards.

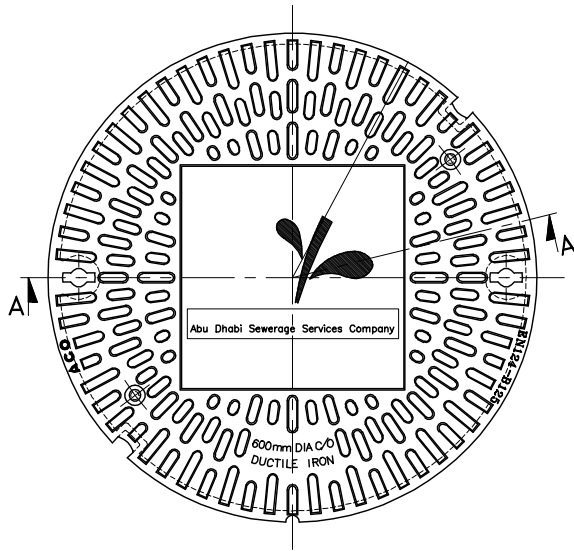
**DIN EN 124 table of load classification**

	<b>Class A 15</b>	Traffic areas used exclusively by pedestrians and cyclists and similar areas such as green spaces
	<b>Class B 125</b>	Pavements, pedestrian areas and similar surfaces, car parks and parking decks
	<b>Class C 250</b>	Kerb areas of streets and pavements
	<b>Class D 400</b>	Road traffic lanes, also pedestrian precincts, car parks and similar paved traffic areas (e.g. freeways parking plots)
	<b>Class E 600</b>	Non-public traffic areas subject to particularly high wheel loads, e.g. industrial traffic lanes
	<b>Class F 900</b>	Special areas e.g. aircraft handling areas at civil and military airports

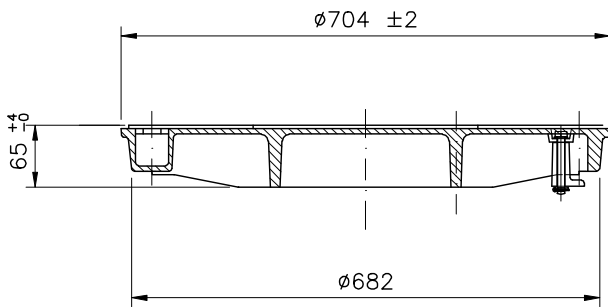




**Circular single seal and double seal manhole covers for load class B125 to D400**



**TOP OF CR.**



**SECTION - AA.**

**Specification notes**

- Dimension: - All are in millimeter (mm)
- Finishing: - Coating will be black bituminous paint/on request
- Specification: - BS EN-124-94
- Material: - ISO 1083-500/7

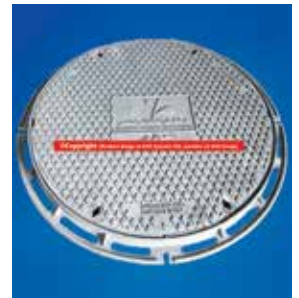
All other specifications on request!

**Dimensions**

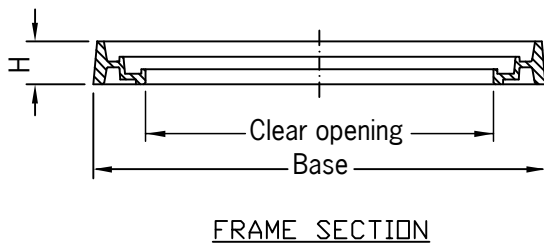
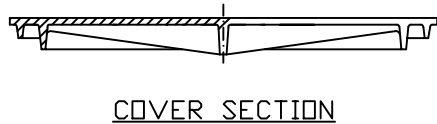
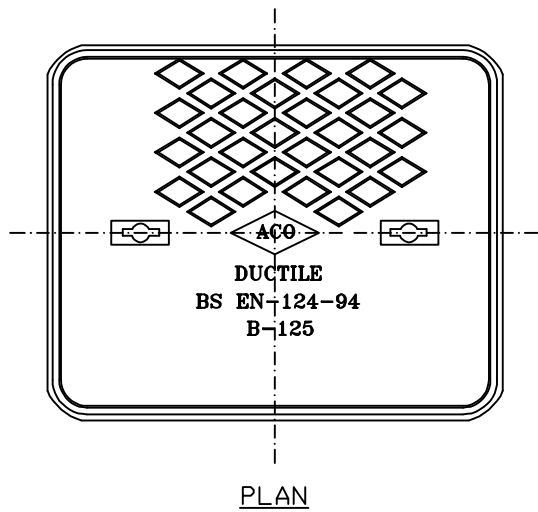
Clear Opening	Base	Depth H	Load Class	Article No.
Ø 600	Ø 854	100	B125	136600
Ø 600	Ø 854	100	D400	136603
Ø 750	920x920	101	B125	136601
Ø 750	920x920	101	D400	136604
Ø 900	Ø 1157	100	D400	136605

**Available with:**

- hinge
- locking system
- markings (as required)



### Square single seal and double seal manhole covers for load class B125 to D400



#### Specification notes

- Dimension: - All are in millimeter (mm)
- Finishing: - Coating will be black bituminous paint/on request
- Specification: - BS EN-124-94
- Material: - ISO 1083-500/7

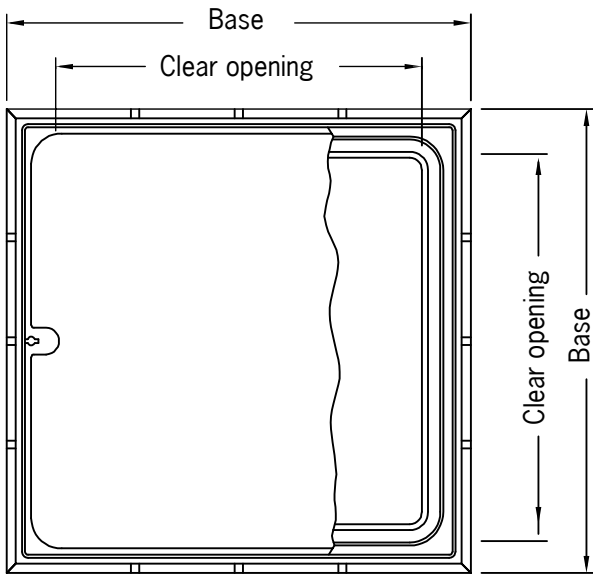
All other specifications on request!

#### Dimensions

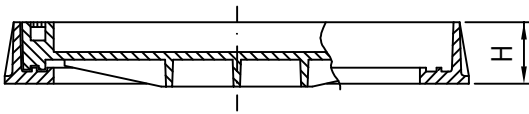
Clear Opening	Base	Depth H	Load Class	Article No.
<b>Double Seal</b>				
300x300	410x410	50	B125	136907
300x300	410x410	65	D400	136906
600x600	710x710	50	B125	136905
600x600	800x800	100	D400	136621
<b>Single Seal</b>				
600x750	750x900	75	B125	136610
600x750	750x900	75	D400	136608



**Recessed manhole covers, single seal and double seal, for load class B125 to D400**



PLAN



**Specification notes**

- Dimension: - All are in millimeter (mm)
- Finishing: - Coating will be black bituminous paint/on request
- Specification: - BS EN-124-94
- Material: - ISO 1083-500/7

All other specifications on request!

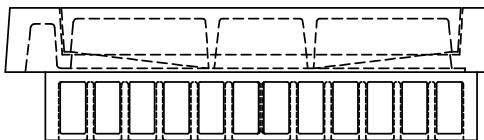
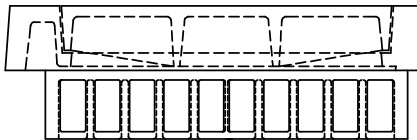
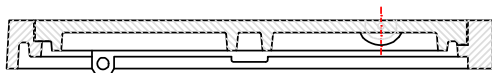
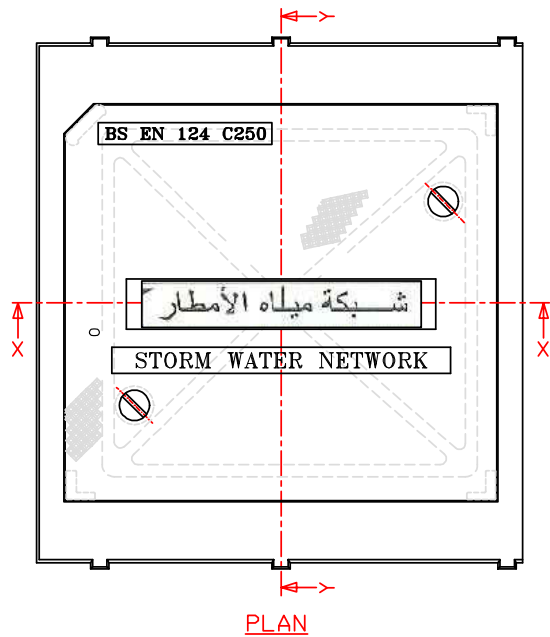
**Dimensions**

Clear Opening	Base	Depth H	Load Class	Article No.
<b>Double Seal</b>				
300x300	450x450	70	B125	136910
300x300	450x450	70	D400	136909
600x600	770x770	70	B125	136908
600x600	770x770	70	D400	136620





### Catch basin covers, cover and frame, for load class D400



#### Specification notes

- Dimension: - All are in millimeter (mm)
- Finishing: - Coating will be black bituminous paint/on request
- Specification: - BS EN-124-94
- Material: - ISO 1083-500/7

All other specifications on request!

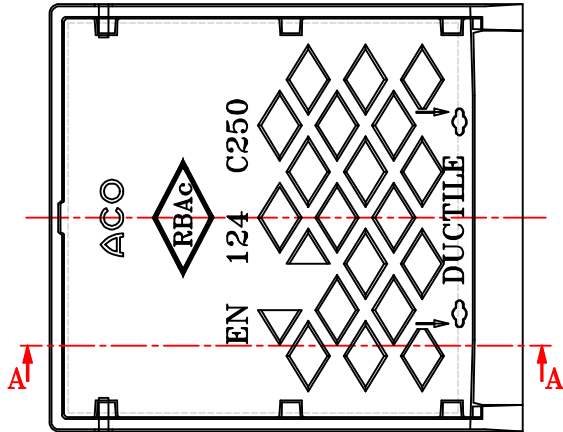
#### Dimensions

Clear Opening	Base	Depth H	Load Class	Article No.
705x655	850x850	40	D400	136650
Other sizes on request!				

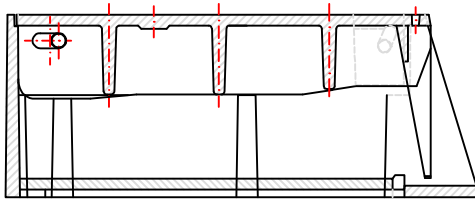




### Ductile iron kerb gully cover for load class C250



**PLAN**



**SECTION- AA.**

#### Specification notes

- Dimension: - All are in millimeter (mm)
- Finishing: - Coating will be black bituminous paint/on request
- Specification: - BS EN-124-94
- Material: - ISO 1083-500/7

All other specifications on request!

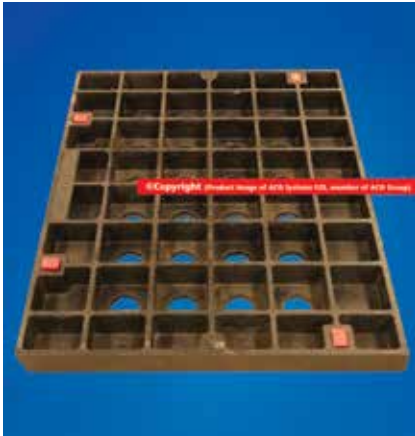
#### Dimensions

Clear Opening	Base	Depth H	Load Class	Article No.
470x470	555x505	170	C250	136619
Other sizes on request!				





## Single & Multi - part covers, for load class B125 to F900



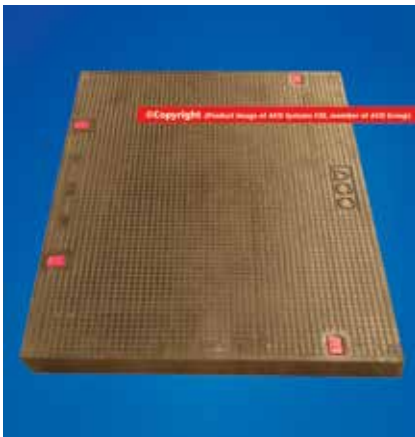
### Specification notes

Dimension: - All are in millimeter (mm)  
 Finishing: - Coating will be black bituminous paint/on request  
 Specification: - BS EN-124-94  
 Material: - ISO 1083-500/7

All other specifications on request!

### Dimensions of recessed multipart covers

Clear Opening	Base	Depth H	Load Class	Article No.
600x900	--	--	D400	140005
900x1270	--	--	D400	140021
1350x1420	--	--	B125	140038
1950x1940	--	--	B125	140037
Other sizes on request!				



### Dimensions of solid multipart covers

Clear Opening	Base	Depth H	Load Class	Article No.
750x1270	--	--	D400	140044
970x1650	--	--	D400	140036
1500x1590	--	--	B125	140029
1350x1940	--	--	B125	140034
Other sizes on request!				



## Multipart covers, for load class B125 to F900

### Specification notes

Multipart access covers combine standard size covers in multiple rows and lengths. They are used when a single part cover does not offer a large enough clear opening or if smaller individual covers are required for easy lifting.

Covers do not need to be of the same width, provided each row has covers of the same length and load class.

All covers and beams can be removed to allow full uninterrupted access or single covers can be removed to provide access to specific areas.

Common applications include container ports, airport pavements, lift motor room floors, and where access to large industrial equipment, large electrical pits, pump wells, and transformers is required.

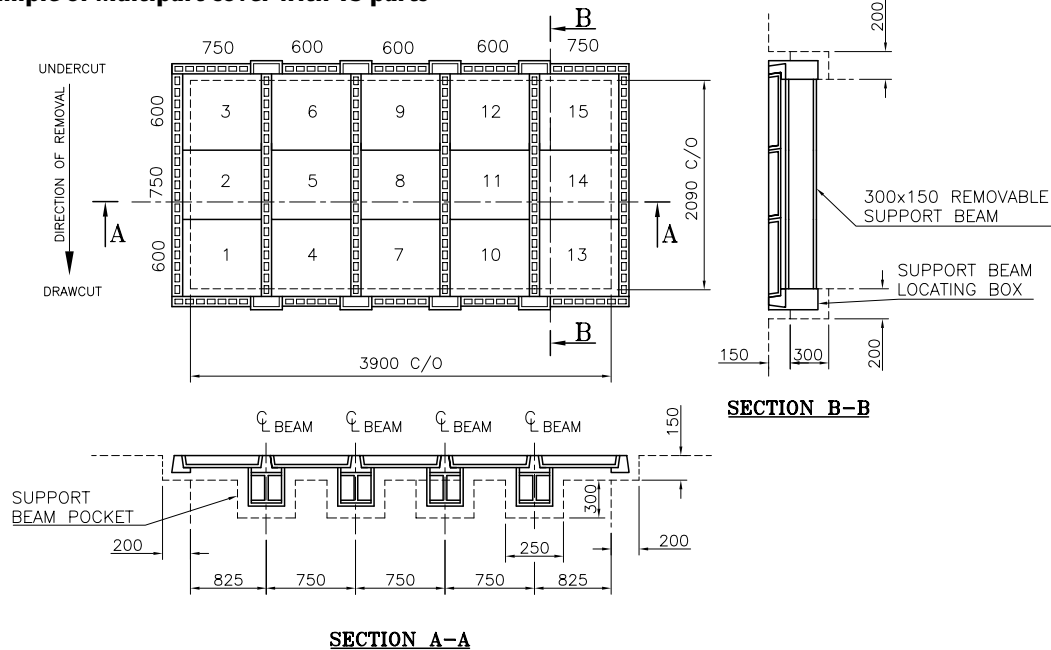
These systems contain individual covers that are designed and manufactured in full compliance with the requirements of EN 124 Metal Access Covers and Grates.

The products in this table provide information on the common multipart sizes. Multipart covers are available in numerous configurations and different cover sizes can be combined to create a clear opening to suit almost any requirement.

Due to the endless range of sizes available, ACO will design the multipart closest to your requirements free of charge and obligation.

More information are available upon request.

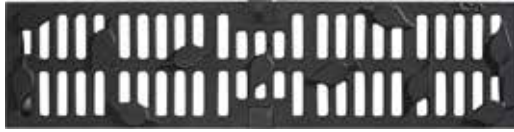
### Example of Multipart cover with 15 parts





## ACO Freestyle gratings for load classes B125 to D400

### Freestyle grating samples:



**Leaf Design**



**Flag Design**



**Square Design**

### Specification notes

For ACO Multiline channel V 100 - 300 G  
 Load class: to D 400 according DIN EN 1433  
 Material: EN-GJS-500-7  
 With screwless ACO Drainlock-grate adjustment  
 Length: 500 mm

You design - we detail and provide you with the finished product. Unique solution for your property you will receive a template with technical specifications. Please contact [www.aco.ae](http://www.aco.ae)

A key unique feature of the ACO cast iron Freestyle grate is the customised design freedom of the visible surface. Variable production tools can be imaginative and individual design concepts, which each planner distinctive design options in the surface of the grate and thus to be drained provide open space. This allows for specific open space in the simplest way unique grate designs will be developed.

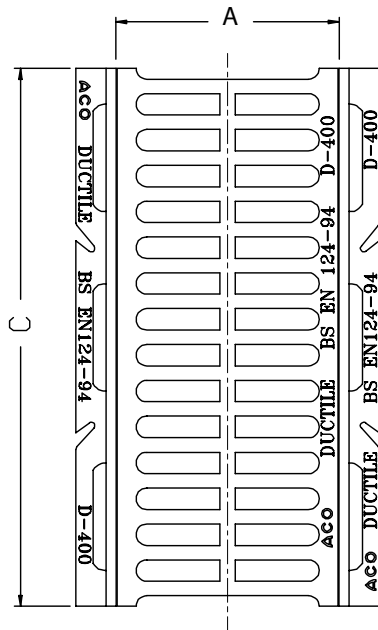
New designs and other sizes, prices and delivery times on request.

**Minimum order 200 pieces (length 500 mm).**

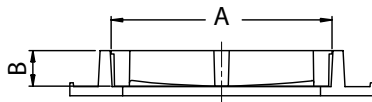




## ACO Standard Trench Grating, for load class B125 to F900



PLAN



SECTION

### Standard grating

#### Gratings for every application

The ACO system solution has a simple range of different gratings suitable for most architectural requirements in terms of aesthetics, functionality and strength. The gratings can be combined as required independent of the channel body and are suitable for all load classes up to F 900.

Designs, sizes, prices and delivery times on request.

### Specification notes

- Dimension: - All are in millimeter (mm)
- Finishing: - Coating as required
- Specification: - BS EN-124-94
- Material: - ISO 1083-500/7
- Option: - Bolted with 4 nos./s.s. screw at extra cost.

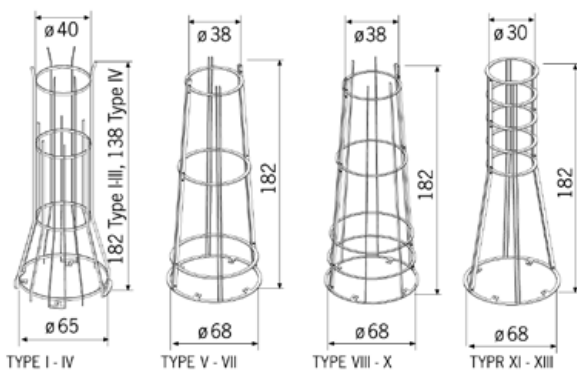
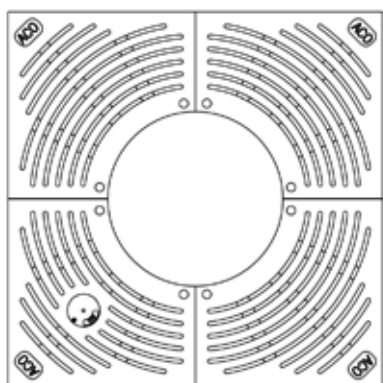
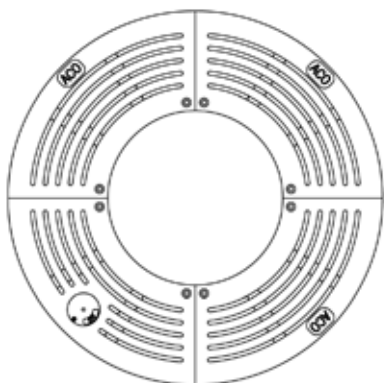
All other specifications on request!

### Dimensions

Width A	Length L	Depth B	Load Class	Article No.
150	750	---	D400	136900
250	750	---	D400	136912
350	750	---	D400	136904
400	750	---	D400	136902
600	750	---	D400	136903
Other sizes on request!				



## ACO tree grate systems – offering optimum protection to street trees



### Specification note

All **ACO Tree grilles** are stable and they are composed of galvanised sub-structure (including frame) and the Tree grilles are made from cast iron according EN-GJL-250 DIN EN1561 (grey cast GG25). This proven material's inherent benefits include rigidity, strength and corrosion resistance. Each grille is coated with a high-grade epoxy resin primer containing zinc phosphate and a two-part black (RAL 9005) structural varnish. Due to customers' varying demands, ACO can supply all tree grilles for unbraked wheel loads of 15kN or 50 kN. ACO standard cast iron tree grilles are available in either circular or square shapes, both of which can be ordered with the classic ray and radial designs. Square tree grilles also in the new diagonal and linear designs. Overall sizes range from 1.25 to 3.00 metres, with an internal opening dimension of 60, 70 or 80cm.

**More information, other designs or sizes are available upon request.**

**Healthy vegetation and great optical appearance**





# Middle East References



ACO catch basin and manhole covers in Al Shamkha/Abu Dhabi



ACO Multi-Part covers in Dubai Industrial City



ACO Manhole covers for Four Seasons Hotel Jumeirah in Dubai



ACO Trench drain gratings and frames, Four Seasons Hotel Jumeirah in Dubai



ACO Multi-part covers in Remraam Community in Dubai



ACO Manhole covers for the Abu Dhabi Municipality



ACO Trench drain gratings and frames for the Dubai Mall



ACO Bridge drain in Manama/Bahrain



# ACO Middle East



## Other products of ACO Systems FZE

- Stainless steel shower channels and floor drains
- Stainless steel drainage, channels and gullies with gratings for commercial kitchens and food & beverage factories
- Stainless steel recessed access covers
- Stainless steel gratings and slot elements for surface water management



**ACO Headquarter for the Middle East Region**

### **ACO Systems FZE**

Office, Manufacture and Warehouse  
Jebel Ali Free Zone, Street 100, Building 07  
P.O. Box 18672, Dubai, United Arab Emirates  
Phone +971 4 880 69 98  
info@aco.ae  
**www.aco.ae**