

# ACO Surface Water Management

Project: Franjo Tuđman Zagreb Airport, March 2016.



## Franjo Tuđman Zagreb Airport

New terminal for 21st century

May 21st of 2014. - marked as the construction start of the new passenger terminal at the International airport of Zagreb (MZLZ). Once completed, the new terminal – scheduled to be delivered at the end of 2016 – will be capable of handling first 5 million then 8 million passengers annually, compared to the current capacity of 2 million passengers. The project comprises a total investment of 331 million EUR: 243 million EUR for the design and construction of the new terminal and 88 million EUR for the maintenance of the airport infrastructure over the entire period of the concession. The concession agreement

includes the financing, design and construction of a 65,000 sqm airport terminal to replace the current one, now at saturation point, as well as, operating the entire airport for until 2042; including the runways, the

current passenger terminal during the entire construction period, the new terminal once it is completed, the cargo terminal, car parks and future property developments.





Currently, the biggest scope of works on the construction site is conducted by Viadukt and Kamgrad. Viadukt is engaged on preparatory works and construction of major drainage system, aprons, accesses to runways, parking lots, access roads and other infrastructure, while Kamgrad will be engaged for construction works at the terminal building.

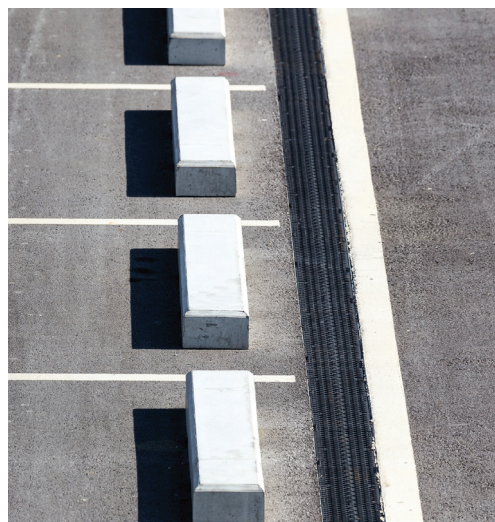
ACO has been involved right from the first scratch looking for a solution how to fulfil, at that time impossible requests beside the airport design team regarding the surface drainage management at the airside. Giving a technical solution to the engineers how to solve the drainage along the runway and taxiway was of crucial importance to get the entry in to the whole drainage solutions which we have managed to design and deliver successfully. With Qmax we got the opportunity to combine all the best characteristics given by the product and we have used the freedom in design regarding the inlet.



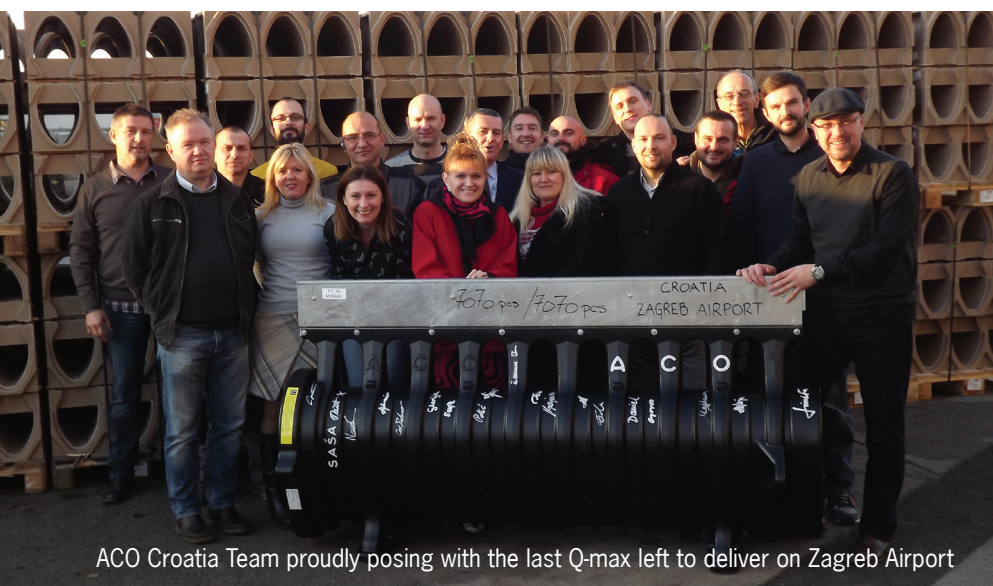
We designed a special Q-Slot inlet with telescopic function to achieve vertical adjustments to the existing ground level securing continues slope and variable Q-Slot inlet, following the ground level deviations. The main challenge was to design the installation detail with Qmax without concreting, direct installed in to the ground and backfilled with fractions 0-32 of crushed stone with the aim to finish all works in a timeframe of 6 hours during the night from 0:00-06:00 AM when no traffic will be taken at the airside.







After many trials in design and one trial installation at the ACO premises in Zagreb, with institutional supervised testing of the whole system we achieved the approval beside the main airport design/construction team. This activity's placed ACO in position being involved in design and delivery for all surface drainage solutions within the whole airport and finally also secured signing the contract with the main constructor Viadukt.



ACO Croatia Team proudly posing with the last Q-max left to deliver on Zagreb Airport



#### ACO products:

Qmax 550 special Slot	8.136 m	S 200 K	281 m
Qmax 700 special Slot	3.244 m	Kerbdrain 480	305 m
Qmax 900 special Slot	2.200 m	Multitop BEGU covers,	
Qmax 700, QFlow F 900	530 m	ø 600 mm, F 900	313 pcs
Qmax 900, QFlow F 900	30 m	Multitop grate 500x500 mm	9 pcs
Monoblock RD 300	170 m	Secant covers, F 900	38 pcs
Monoblock RD 200	251 m	Combipoint 300x500 mm,	
Monoblock RD 150	209 m	D 400	68 pcs
Multiline V 150, C 250	2.370 m	SOLID TOP covers, SS	15 pcs
Multiline V 150 Brickslot	227 m	LIPUMAX P-B NS 7	1 pc
Multiline V100 Flach, SS	245 m	LIPUMAX P-B NS 10	1 pc

## ACO reference

**PROJECT:** Franjo Tuđman  
Airport, Zagreb

**INVESTOR:** MZLZ

**CONTRACTOR:** Viadukt d.d.

**DESIGN:** Kincl architects

**HYDRO PROJECT:** IPZ d.d.

**YEAR OF CONSTRUCTION:**  
2014.-2017.

**ACO Građevinski elementi d.o.o.**

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