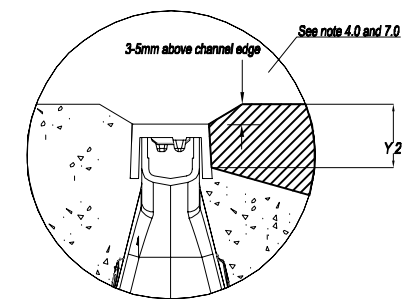


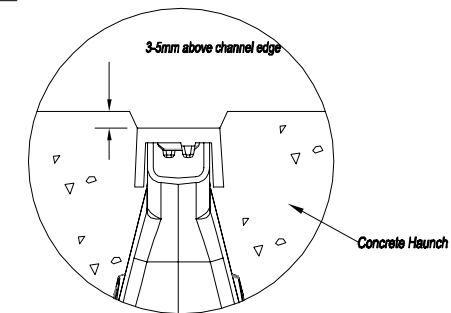
8.0

LOAD CLASS CONCRETE REQUIREMENTS				
CHANNEL SIZE	C250	D400	E600	F900
Qmax 225	C20/25	C20/25	C32/40 or EU 30/37	C32/40 or EU 30/37
X	150	150	150	200
Z	150	150	150	200
Y1	110 MAX	110 MAX	N/A	N/A
Y2	35 MAX	35 MAX	N/A	N/A
REINFORCEMENT	NO	NO	NO	YES
Qmax 350	C20/25	C20/25	C32/40 or EU 30/37	C32/40 or EU 30/37
X	150	150	150	200
Z	150	150	150	200
Y1	110 MAX	110 MAX	N/A	N/A
Y2	35 MAX	35 MAX	N/A	N/A
REINFORCEMENT	NO	NO	NO	YES
DIMENSION D	265mm	265mm	265mm	265mm
Qmax 550	C20/25	C20/25	C20/25	C32/40 or EU 30/37
X	150	150	200	200
Z	150	150	200	200
Y1	110 MAX	110 MAX	N/A	N/A
Y2	35 MAX	35 MAX	N/A	N/A
REINFORCEMENT	NO	NO	NO	YES
DIMENSION D	290mm	290mm	290mm	290mm
Qmax 700	C20/25	C20/25	C32/40 or EU 30/37	C32/40 or EU 30/37
X	150	150	200	200
Z	150	150	200	200
Y1	110 MAX	110 MAX	N/A	N/A
Y2	35 MAX	35 MAX	N/A	N/A
REINFORCEMENT	NO	NO	YES	YES
DIMENSION D	315mm	315mm	315mm	315mm
Qmax 900	C20/25	C32/40 or EU 30/37	C32/40 or EU 30/37	C32/40 or EU 30/37
X	200	200	200	200
Z	200	200	200	200
Y1	110 MAX	110 MAX	N/A	N/A
Y2	35 MAX	35 MAX	N/A	N/A
REINFORCEMENT	NO	YES	YES	YES
DIMENSION D	315mm	315mm	315mm	315mm

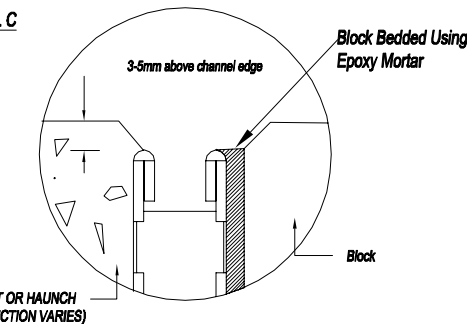
DETAIL A



DETAIL B



DETAIL C



See drawing E1-E01-003-3 for general notes on installation.

GENERAL NOTE:

These Installation details are based on UK site methods and installation practices only. The suitability of all other local or national site installation practices must be checked. Please seek engineering advice.

NOTES:

1.0 GROUND CONDITIONS: The customer should ensure that the minimum dimensions shown are suitable for the existing ground conditions. Engineering advice may be necessary.

2.0 SURFACE PROTECTION: The channels must not be trafficked until completion of the installation and the pavement surface. Thereafter the channel should be protected and kept free from mud and stones. During site work ensure that the plastic protective strip (supplied with the galvanised steel edge rails) or the ductile iron edge rail protector (supplied separately) is not damaged or displaced, in order to prevent debris entering the channel during construction.

3.0 REINFORCEMENT: The reinforcement required in the concrete surround varies with the installation group (load class) and channel size. For a load class D 400 application it is likely to be sufficient to continue the slab reinforcement (if any) through the Qmax arch detail under the slot. For a load class F 900 it may be necessary to reinforce over, under and to the sides of the unit (as indicated). Engineering advice should be sought.

4.0 CONCRETE SURROUND: The minimum class of concrete is given in table 8.0 depending on channel size and load class, subject to the client engineer's specification. Ensure that the channels do not float while pouring the concrete. To prevent floatation or distortion of the 550, 700 and 900 when using high workability concrete, pour concrete in several lifts, e.g. 1 to the line on the side of the channel, 2 to the crown of the channel and 3 to the finished levels. concrete lifts to 1 and 2 to be 50mm maximum slump (consistence class S1)

5.0 JOINTS: The detailing of joints is to be determined by the engineer in conjunction with the detailing of the pavement. A longitudinal expansion joint is typically formed down each side of the concrete surround (as indicated). A transverse joint is typically formed at each channel section collar (e.g. by 100mm deep saw cut or 75mm deep plastic joint former).

6.0 WATERTIGHTNESS: Where ACO Qmax channels are to be installed with watertight joints, the seal between channel units must be checked for cleanliness and then smeared with lubricant jelly such as proprietary pipe jointing lubricant. Guidance on the preparation should be sought from the lubricant manufacturer. ACO Qmax channels are tested to confirm compliance with the watertightness requirements of BS EN 1433 when filled with water to the top of the channel bore (below the Inlet arches). Installation must be in accordance with ACO's recommendations and the recommendations of the lubricant manufacturer. It is envisaged that the channel joints would not be subject to movement, but any movement of the joint might compromise the watertightness.

7.0 PAVEMENT: The combined depth of the asphalt pavement must not exceed the Y1 and Y2 dimensions given in table 8.0. Ensure the edge rail arches are well embedded into the concrete. When laying blocks with the ACO Qmax with Q-Slot edge; the first block must be bedded in epoxy mortar to ensure the slot is supported and the block is restrained from movement.

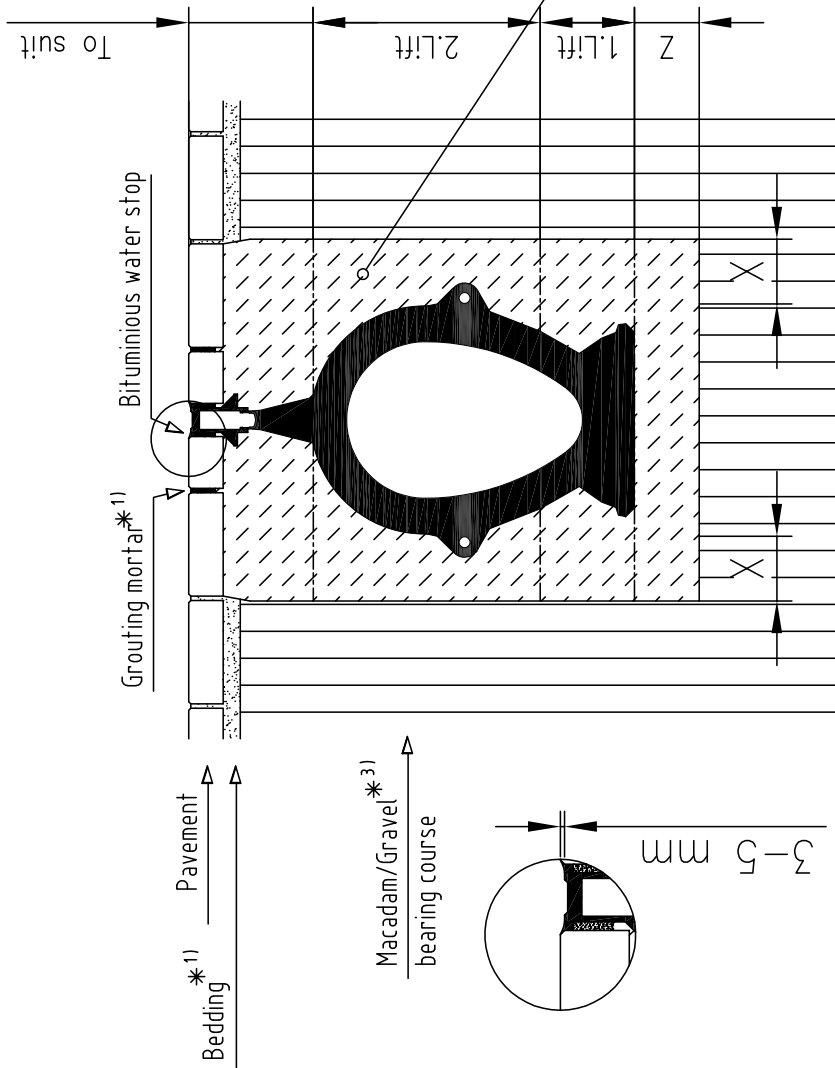
9.0 CUTTING OF CHANNELS: The 2000mm long channels may be cut to a shorter length of 400mm, 1000mm and 1400mm.

D	04.01.2012	GENERAL NOTES ADDED		GS
C	11.06.12	ASPHALT INSTALLATION AMENDED		KS
B	12.01.12	COMBINED INSTALLATION DETAIL FOR Qmax 225, 350, 550, 700 AND 900		RS
A	29.07.11	COMBINED INSTALLATION DETAIL FOR Qmax 225, 350, 550, 700 AND 900		RS
Issue	Date	Description	Name	
Scale: N/A @ A3		Projection: ISO-E	ACO Business Park Hitchin Road, Shefford, Bedfordshire, SG17 5TE Tel: 01462 816666 Web: www.aco.co.uk	
Drawn	Date	Name	Checked by	Drawing No.
Updated	Date	Name	Checked by	Issue
Title: ACO Qmax INSTALLATION DETAIL				D

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Installation in paved areas, load class A 15 to F 900

Channel size	Foundation	Load class and concrete requirements						
		A 15	B 125	C 250	D 400	E 600	F 900	
Qmax 150	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	Project specific, advice on demand
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 225	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 350	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 550	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 700	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 900	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	



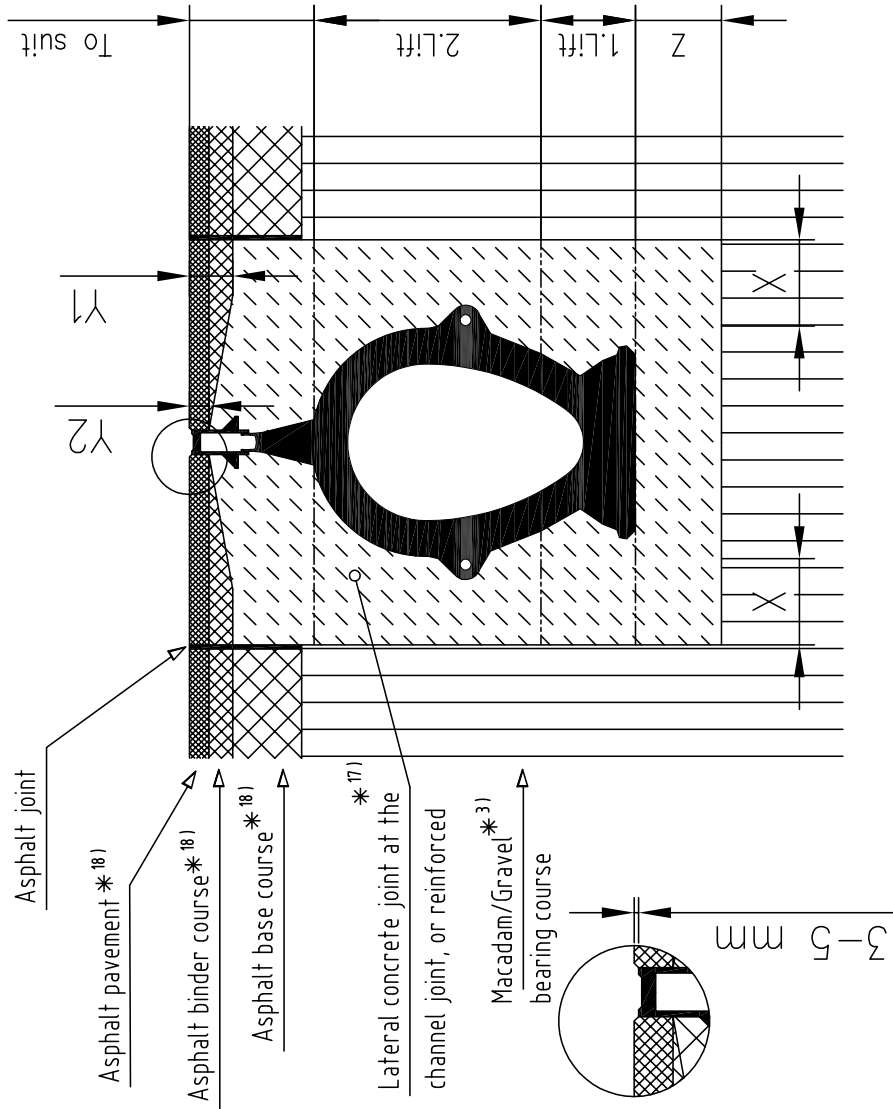
1. Lift

550	700	900
265 mm	290 mm	315 mm

*1)
Lateral concrete joint at the channel joint, or reinforced

Installation in asphalt areas, load class A 15 to D 400

Channel size	Foundation	Load class and concrete requirements						
		A 15	B 125	C 250	D 400	E 600	F 900	
Qmax 150	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	Project specific, advice on demand
	Exposure class	X	(X0)	(X0)	(X0)	(X0)	(X0)	
	Z	≥ 100	≥ 100	≥ 100	≥ 100	≥ 100	≥ 100	
	Y1	max 120	max 120	max 120	max 120	max 120	max 120	
Qmax 225	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
	Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	
	Y1	max 120	max 120	max 120	max 120	max 120	max 120	
Qmax 350	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
	Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	
	Y1	max 120	max 120	max 120	max 120	max 120	max 120	
Qmax 550	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
	Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	
	Y1	max 120	max 120	max 120	max 120	max 120	max 120	
Qmax 700	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
	Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	≥ 150	
	Y1	max 120	max 120	max 120	max 120	max 120	max 120	
Qmax 900	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
	Z	≥ 200	≥ 200	≥ 200	≥ 200	≥ 200	≥ 200	
	Y1	max 120	max 120	max 120	max 120	max 120	max 120	

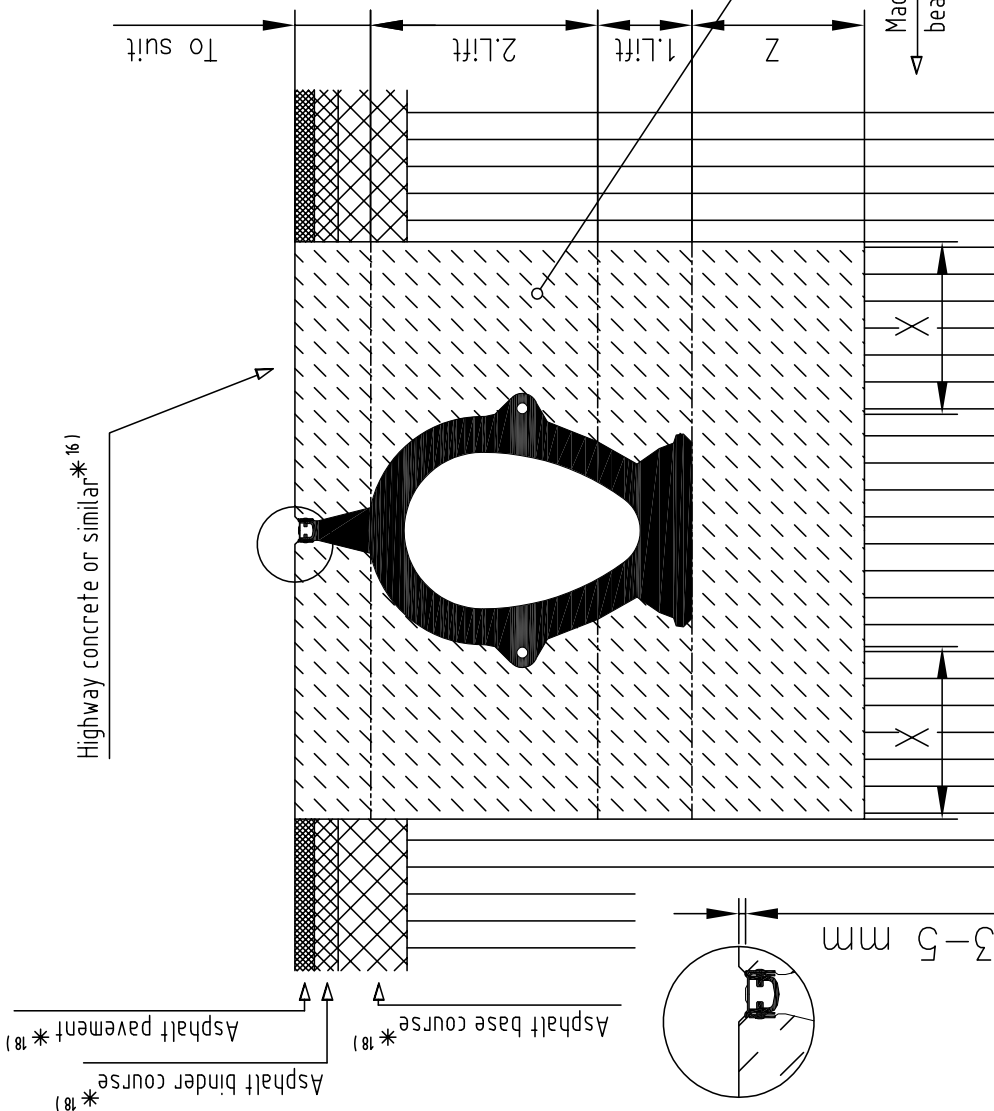


1. Lift

550	700	900
265 mm	290 mm	315 mm

Installation in asphalt areas, load class A 15 to F 900

Channel size	Foundation	Load class and concrete requirements						
		A 15	B 125	C 250	D 400	E 600	F 900	
Qmax 150	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
		X	≥ 100	≥ 100	≥ 100	≥ 150	≥ 200	
Qmax 225	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
		Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 200	
Qmax 350	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
		X	≥ 150	≥ 150	≥ 150	≥ 150	≥ 200	
Qmax 550	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
		Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 200	
Qmax 700	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
		Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 200	
Qmax 900	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
		Z	≥ 150	≥ 150	≥ 150	≥ 150	≥ 200	

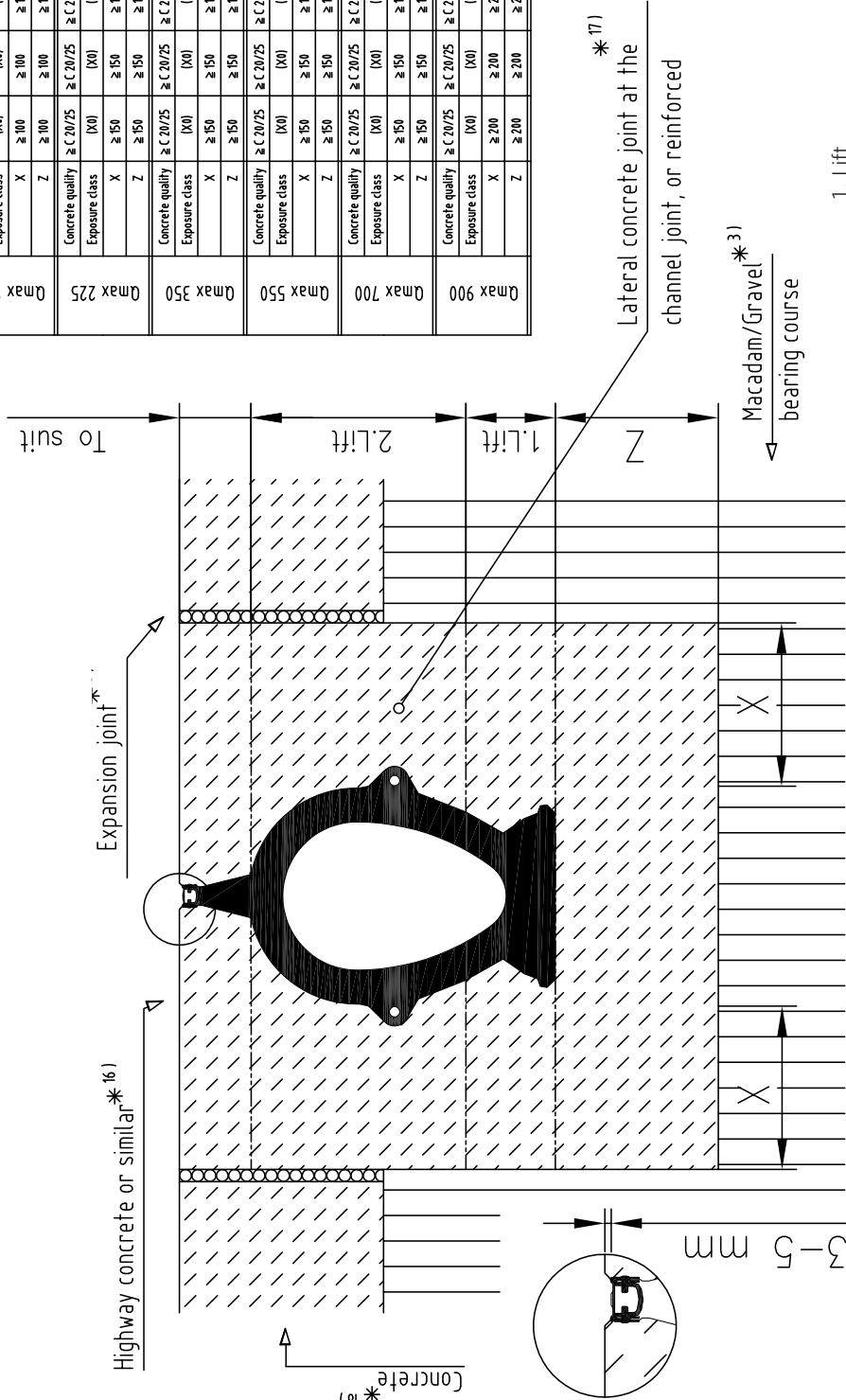


1. Lift

550	700	900
265 mm	290 mm	315 mm

Installation in concrete areas, load class A 15 to D 400

Channel size	Foundation	Load class and concrete requirements						
		A 15	B 125	C 250	D 400	E 600	F 900	
Qmax 150	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 225	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 350	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 550	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 700	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	
Qmax 900	Concrete quality	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 20/25	≥ C 32/40	≥ C 32/40	
	Exposure class	(X0)	(X0)	(X0)	(X0)	(X0)	(X0)	



1. Lift

550 700 900

265 mm 290 mm 315 mm