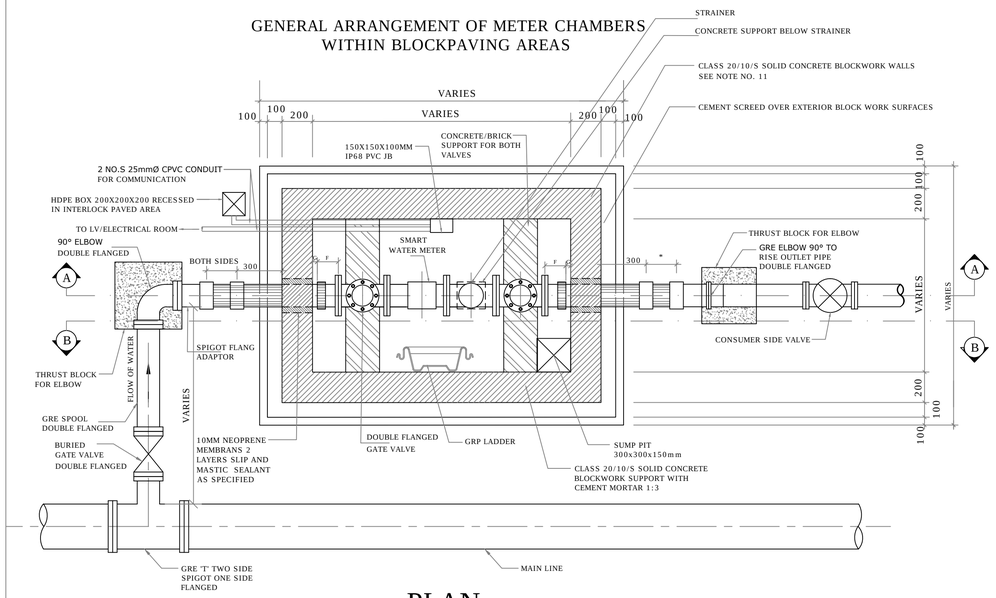
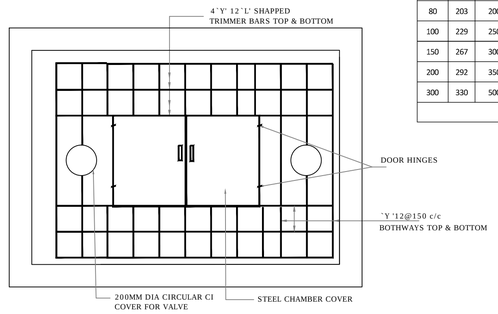
GENERAL ARRANGEMENT OF METER CHAMBERS WITHIN BLOCKPAVING AREAS



PLAN

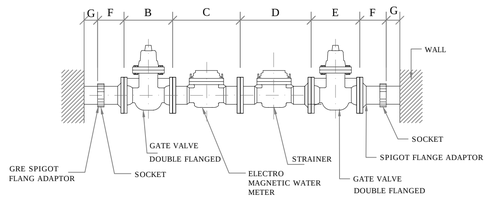


REINFORCEMENT DETAILS

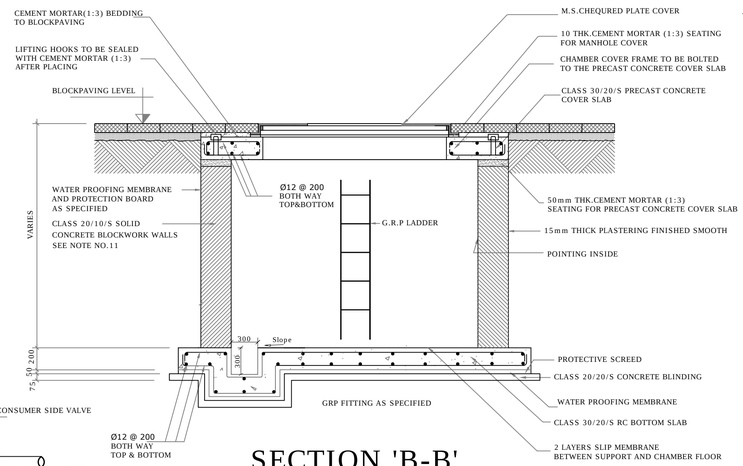
METER CHAMBER DIMENSION

WATER METER SIZE	INLET VALVE (L)	METER (L)	STRAINER (L)	OUTLET VALVE (L)	SPIGOT FLANGE ADAPTOR (L) F	CLEARANCE BETWEEN SOCKET ABD CHAMBER WALLS (L) G	TOTAL LENGTH	CLEARANCE AT BOTH SIDES OF METER IN WIDTH FROM CHAMBER WALLS	METER WIDTH	TOTAL WIDTH	CHAMBER DIMENSION	CHAMBER COVER DIMENSION
A	B	C	D	E	(INLET SIDE + OUTLETSIDE	(INLET SIDE + OUTLETSIDE	(B+C+D+E+F+G)	(200+200)	H	I	(Minimum)	(Minimum)
50	178	200	300	178	—	250+250(500)	1356	400	110	510	1400X700	900X600
80	203	200	350	203	—	250+300(550)	1506	400	140	540	1600X700	900X600
100	229	250	350	229	260+260(520)	150+150(300)	1878	400	165	565	2000X700	900X600
150	267	300	500	267	270+270(540)	150+150(300)	2174	400	220	620	2200X700	1100X600
200	292	350	500	292	260+260(520)	150+150(300)	2254	400	280	680	2400X700	1100X600
300	330	500	500	330	260+260(520)	200+200(400)	2580	400	375	775	2600X800	1100X600

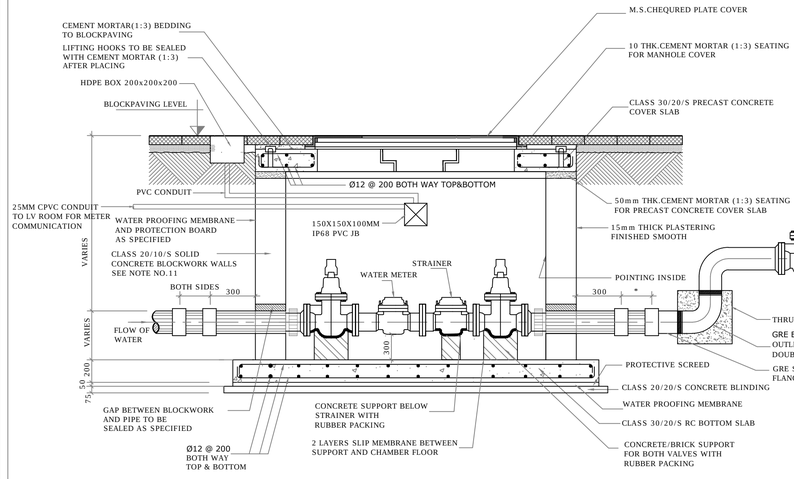
ALL UNITS ARE IN MM



VALVE AND FLOW METER ARRANGEMENT



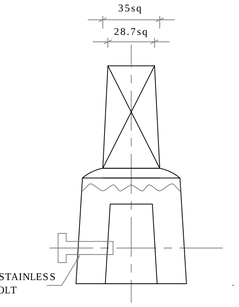
SECTION 'B-B'



SECTION 'A-A'

SECTION 'B-B'

STEEL DETAIL IN CASE OF RCC WALL



PIPE SIZE, METER SIZE, METER CAPACITY AND STORAGE TANK REQUIREMENTS

Pipe Size To Install the Meter (mm)	Meter Size (mm)	Meter Capacity Quantity of Water the Meter can Deliver in 24 Hours (imperial Gallons)	Storage Tank Requirement for Standard Residential Premises	Storage Tank Requirement for Labour Accommodation and other High Consumption Premises
50 to 80	50	40,000	Equivalent to 24 Hours Consumption	Equivalent to 48 Hours Consumption
80 to 100	80	100,000	Equivalent to 24 Hours Consumption	Equivalent to 48 Hours Consumption
100 to 150	100	150,000	Equivalent to 24 Hours Consumption	Equivalent to 48 Hours Consumption
150 to 200	150	350,000	Equivalent to 24 Hours Consumption	Equivalent to 48 Hours Consumption
200 to 300	200	750,000	Equivalent to 24 Hours Consumption	Equivalent to 48 Hours Consumption
300 to 450	300	1,500,000	Equivalent to 24 Hours Consumption	Equivalent to 48 Hours Consumption

AMI 2" to 12" BULK WATER METER INSTALLATION IN CHAMBER - DETAILS

NOTES:

1. Water meters, 80mm dia. and greater sizes shall be installed horizontally inside the meter chambers as shown in standard installation drawing PEW–STD–AMI–006. These meters shall be installed in concrete waterproof chambers in the same level of mainline or raised to ground level as per the site condition to avoid ground water flooding inside the meter chamber.
2. Water meters, 50mm dia. shall be installed in Meter Cabinets on wall / free standing in vertical position as shown in standard installation drawing PEW–STD–AMI–004 & 005.
3. In certain circumstances, 50mm dia. bulk water meters shall be installed horizontally in Meter Chambers based on site conditions and as instructed/approved by DEWA Engineer.
4. Bulk meter 50mm dia. and greater sizes should not be installed in the basement, pump room, meter room, upper floors or roof of the buildings under any circumstances.
5. Meter installation guidelines shall strictly be followed while installing the meter.
6. Meter should not be allowed to fall or receive impact damage during installation.
7. Meter shall be installed in accordance with the arrows shown on the body of the meter.
8. Meter register shall be arranged to read the meter easily from outside the chamber/ cabinet.
9. Pipes, valves and all other fittings used for meter connection shall be high quality, heavy duty, non–toxic, non–corrosive material.
10. Installation of T joints, bends etc. immediately before or after the meter should be avoided.
11. The meter should always be full of water to avoid air flow through the meter, a 90 deg. bend raised upwards shall be installed after meter to connect it to customer pipeline, as required.
12. Proper Concrete Support shall be provided for the Valves, Strainer, Pipes and fittings inside the meter chamber in order to avoid any displacement of meter and associated fittings. Water Meter and Strainer body, flanges or any other part should not be covered by concrete.
13. Do not step on the meter while installation, reading or maintenance of the meter.
14. All connections shall be checked thoroughly for leak after installation of the meter.
15. Do not attempt to correct problems by hitting the body of the meter.
16. Never try to adjust the meter position after tightening the bolts.
17. Pipeline shall be flushed thoroughly before the installation of the meter.
18. A Strainer shall be fitted downstream the meter to avoid entry of debris into customer pipelines and reservoir.
19. A Non–Return Valve (NRV) shall be installed after the meter, if the supply is from two directions to avoid reverse reading/flow through the meter, as per the site condition.
20. Full–bore valves shall be fitted upstream & downstream to isolate the meter for maintenance.
21. Consumer shall install a separate valve outside the meter chamber on their pipeline to isolate water supply for any maintenance works.
22. Installation of water booster pump upstream or downstream the meter is prohibited, any violations will be penalized as per the applicable laws.
23. Consumers can install water pumps after their storage tank, if required.
24. Ensure the construction/installation of meter chamber including the chamber cover is completed before installing the meter to avoid damage to the meter, similarly ensure the meter cabinet is in place before the installation of bulk meter in the cabinet.
25. Detailed shop drawing shall be submitted for DEWA approval before commencement of work.

GUIDELINES FOR BULK WATER METER CHAMBERS

1. The meter shall be installed in a chamber (meter shall not be buried) suitable in size for fitting in, maintenance and removal of the meter.
2. The meter chamber, precast HDPE or Concrete, shall be waterproof, clear of obstacles, even, rigid and not slippery. There shall be a sump pit inside chamber for draining water.
3. A non–corrosive/GRE ladder shall be provided permanently in chambers deeper than 1mtr for easy access to the meter.
4. Ladder shall be installed away from the meter to provide sufficient space for water meters to permit installation, reading, servicing and removal of the meters.
5. Meter chamber shall be protected from getting buried by sand, flooding, rainwater, and barricaded to avoid parking vehicles on the chamber.
6. The flange or body of the meter, strainer and valve should not be covered by concrete while constructing the chamber.
7. Nut & Bolt shall be positioned in such a way that Nut on wall/concrete block side and Bolt on Meter/Valve side for easy tightening and removal of the same.
8. A 25mm dia. heavy duty conduit shall be laid between Water Meter Chamber and LV room for Meter communication cable.
9. The conduit shall be GI if routed along walls/ceilings leading to LV room or CPVC (with wall thickness of 2.8mm) if laid underground in sand or concealed in concrete/block walls. In any case, while entering the LV room, the conduit shall be changed to GI at a minimum of 2m distance before entering LV room.
10. A two way junction box of appropriate material shall be provided at every 25m length and each corner (direction change) of the conduit with metallic pulling spring for cable pulling purpose. In case of underground conduit, a concrete pit of dimension 200X200X150mm shall be provided to accommodate the two way Junction box. The connection of conduit to junction box shall be done with proper couplings/adaptors.
11. A PVC Junction box of dimension 100X100X50mm and IP 68 rating shall be provided inside Meter Chamber and fitted with a PVC PG–7 gland.
12. A HDPE box of dimension 200X200X150mm shall be recessed on the floor near Meter Chamber and connected to the Junction box inside Chamber through a separate 25mm CPVC conduit with proper couplings/adaptors as shown in the drawing.
13. A GI Junction box of dimension 150X150X50mm and IP 56 rating shall be installed inside the LV room on wall at a suitable position at a height of 1600mm from finished floor level. The connection between conduit and Junction box shall be through suitable couplings/adaptors.
14. A HDPE box of dimension 200x200x150mm shall be recessed on the interlock paved floor near meter chamber and connected to the JB inside chamber through 25mm CPVC conduit with proper couplings/adaptors. Interlock tiles shall be paved on the surface area (Min. 1000mm width) around the meter chamber.
15. Meter chamber cover shall be clearly and indelibly marked with DEWA logo and the wording 'Water Meter' on the cover in Arabic and English language.
16. DEWA Account No. plate shall be affixed inside the meter chamber wall for identification.
17. The inlet valve and pipe before the meter shall be directly buried with a 150mm dia. ductile iron cover to the inlet valve. Meter, strainer, outlet valve and associated pipes & fittings shall be inside the chamber for 200mm dia. and greater size meters.
18. The dimensions given below shall be followed strictly for the construction of meter chamber to accommodate meter and associate fittings as per typical installation drawings: (PEW–STD–AMI–006).

REV.	DATE	DR'N BY	CH'D BY	AP'D BY	DESCRIPTION

AUTHORITY:

GOVERNMENT OF DUBAI

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PROJECT:

AMI (ADVANCED METERING INFRASTRUCTURE)
WATER METER INSTALLATION

TITLE:

AMI - WATER

BULK WATER METERS IN CHAMBER (FOR BULK METERS 50MM TO 300MM DIA. CONNECTION)

PREPARED BY: Shafeeque	CHECKED BY: A.BinSugat	SCALE: N.T.S
DESIGNED BY: Sadu	APPROVED BY: Branly	DATE:12/12/2017

DRAWING NO: PEW-STD-AMI-004

REV