FURAAT PRECAST MODULAR STEP WELL

DESIGNED TO OFFER FLEXIBLE & EFFECTIVE RAINWATER HARVESTING SOLUTIONS
STEP 01:
A PIT OF 2000 MM DIAMETER IS EXCAVATED IN THE GROUND AT SELECTED LOCATION WITH A PREDETERMINED DEPTH BASED ON LEVELS OF RAINWATER INLETS.

STEP 02:
BOTTOM SURFACE OF THE PIT IS FINISHED WITH BRICKBAT CONCRETE CEMENT.

STEP 03:
PAIR OF HALF OR ONE FULL OCTAGONAL SLAB IS LEVELLED ON THE FINISHED BOTTOM SURFACE OF THE PIT.

SPECIFICATIONS OF OCTAGONAL SLAB:
DIAMETER / ACROSS DIAGONAL ~ 1450 MM
INTERNAL DIAMETER ~ 1000 MM
THICKNESS ~ 50 MM
MATERIAL - PRECAST CONCRETE
WEIGHT ~ 58 KG - HALF OCTAGONAL SLAB

STEP 01:
A PIT OF 2000 MM DIAMETER IS EXCAVATED IN THE GROUND AT SELECTED LOCATION WITH A PREDETERMINED DEPTH BASED ON LEVELS OF RAINWATER INLETS.
STEP 04:
INSIDE DIAMETER OF 1000 MM IS FILLED WITH CEMENT CONCRETE MIXTURE.
INCASE OUTPUT OF THE WELL IS DESIGNED FROM THE CENTER OF BASE, A BEND WITH CONNECTING PIPE LINE IS PLACED BEFORE EXECUTING STEP 02.
STEP 05:
SPHERICAL LOCATORS ARE PLACED IN EIGHT HEMISPHERICAL CAVITIES ON THE TOP FACE OF OCTAGONAL SLAB

SPECIFICATIONS OF SPHERICAL LOCATOR:
DIAMETER ~ 20 mm
MATERIAL - GLASS / POLYPROPYLENE
STEP 06/1:
FIRST VERTICAL SLAB IS PLACED PERPENDICULAR TO THE OCTAGONAL SLAB BY MAKING IT REST ON A FACE HAVING HEMISPHERICAL CAVITY

SPECIFICATIONS OF VERTICAL SLAB:
LENGTH X WIDTH ~ 1075 X 575 MM
THICKNESS ~ 40 MM
MATERIAL - PRECAST CONCRETE
WEIGHT ~ 58 KG
STEP 06/2:
REMAINING VERTICAL SLABS ARE PLACED ADJACENT TO EACH OTHER BY RESTING THEM ON FACES HAVING HEMISPHERICAL CAVITIES
STEP 07:
SPHERICAL LOCATORS ARE PLACED AGAIN IN HEMISPHERICAL CAVITIES ON THE FACES OF EIGHT VERTICAL SLABS
STEP 08: 
A pair of half or one full octagonal slab is placed on top of vertical slabs by engaging its eight hemispherical cavities on its bottom surface with spherical locators kept on the faces of vertical slabs.

SPECIFICATIONS OF ONE MODULE:
- Diameter/Across Diagonal ~ 1450 mm
- Height ~ 1125 / 1175 mm
- Material - Precast Concrete
- Weight ~ 700 kg
- Inside Volume ~ 1.6 cu mt

STEPS 03-08: 
These steps constitute one module.
STEP 09:
BY REPEATING STEPS 05-09 ANOTHER MODULE CAN BE ASSEMBLED ON TOP OF THE FIRST MODULE BY USING THE TOP OCTAGONAL SLAB OF THE FIRST MODULE.
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BY REPEATING STEPS 05-09 ANOTHER MODULE CAN BE ASSEMBLED ON TOP OF THE FIRST MODULE BY USING THE TOP OCTAGONAL SLAB OF THE FIRST MODULE

CONSTRUCTION
STEP 10:
BY REPEATING STEPS 05-09 ANOTHER MODULE CAN BE ASSEMBLED ON TOP OF THE SECOND MODULE BY USING THE TOP OCTAGONAL SLAB OF THE SECOND MODULE.
CONSTRUCTION

STEP 11: PAIR OF HALF ROUND / ONE FULL ROUND LID IS PLACED ON TOP OF THE TOPMOST OCTAGONAL SLAB TO COVER 1000 MM DIAMETER OPENING

STEP 12: GROUTING IS DONE

STEP 13: THE GAP BETWEEN THE OUTER SURFACE OF THE ERECTED MODULAR STEP WELL & EXCAVATED PIT IS FILLED BACK WITH EXCAVATED SOIL AND RAMMING IS DONE

SPECIFICATIONS OF TOP LID:
DIAMETER ~ 1050 MM
THICKNESS ~ 50 MM
MATERIAL - PRECAST CONCRETE
WEIGHT ~ 54 KG - HALF ROUND SLAB
ADVANTAGES:

- Quick Installation
- Aesthetic Look & Detailing
- Flexibility in Volume & Depth of Well
- Good Quality Precast Concrete Slabs
- Integrated Large Steps for Climbing Down, Hence Easy to Maintain
- One Skilled and Two Unskilled Labourers Can Assemble This Well Within Hours
- Well Can Be Erected Around Bore Well Without Switching Off Its Power
- Well Can Be Assembled Without Using Any Special Devices Like Chain Pulley As Weight of Each Slab Facilitates Working with Simple Tools, This Makes Assembly Hassle Free in Rural Areas
- Size, Shape & Weight of Slabs Facilitates Well to Be Transported to Remotest Part of Our Country Even Using Basic Transport Like Bullock Cart
- Well Can Be Reused / Recycled
INSPIRED BY PAST DESIGNED FOR FUTURE

HARVESTING SYSTEM TO REJUVENATE EARTH, FOR DRINKING NEEDS & FOR BOREWELL RECHARGING
STEP 14:
INTERMEDIATE LID IS PLACED IN THE BOTTOM OF TOP MODULE, DESIGN OF INTERMEDIATE LID ALLOWS WATER TO PERCOLATE IN THE NEXT MODULE.

STEP 15:
CONTINUOUS V WIRE SCREEN IS ASSEMBLED IN THE BOTTOM MODULE & ASSEMBLY OF THE CENTRAL SPINE WITH ONE END ATTACHED TO V-WIRE SCREEN & OTHER COMING OUT OF THE WELL IS DONE.

STEP 16:
END CAP WITH AIR VENTS IS FIXED ON THE TOP END OF CENTRAL SPINE.

SPECIFICATIONS OF INTERMEDIATE LID:
- DIAMETER ~ 1050 MM
- THICKNESS ~ 50 MM
- MATERIAL - PRECAST CONCRETE
- WEIGHT ~ 54 KG - HALF ROUND SLAB

DIAMETER ~ 1050 MM
THICKNESS ~ 50 MM
MATERIAL - PRECAST CONCRETE
WEIGHT ~ 54 KG - HALF ROUND SLAB
**STEP 17:** High quality filter sand is filled in the bottom module covering V-wire screen fully.

**STEP 18:** Layers of charcoal & gravel are laid on top of intermediate lid in the top module.

**SPECIFICATIONS OF V-WIRE SCREEN:**
- Diameter ~ 430 mm
- Height ~ 300 / 450 / 600 mm
- Material - SS 204CU / 304
- Aperture ~ 0.3-1.2 mm - depending on quality of filtration

**SPECIFICATIONS OF CENTRAL SPINE:**
- Diameter ~ 150 mm
- Material - High quality PVC
- Pressure rating ~ 6 kg/cm square

**CONSTRUCTION**
TWO LAYER RECHARGE WELL:
IN CASE OF EXCAVATION CONSTRAINTS & MODERATE RAINFALL, TWO LAYER RECHARGE WELL WORKS WITH EQUAL EFFICIENCY.
SINGLE LAYER RECHARGE WELL:
IN CASES OF EXTREME EXCAVATION CONSTRAINTS & LOW RAINFALL, LAYERS OF CHARCOAL & GRAVEL ALONG WITH SAND BED CAN BE ACCOMMODATED IN ONE SINGLE MODULE ALSO
ASSEMBLY AROUND EXISTING BORE WELL:
PRECAST MODULAR STEP WELL CAN BE ASSEMBLED AROUND ANY EXISTING BORE WELL WITH ANY NUMBER OF LAYERS. HOWEVER, WE RECOMMEND STRUCTURE OF MODULAR STEP WELL TO BE AWAY FROM BORE WELL; IN SUCH CASES UNDERGROUND CONNECTION OF OUTPUT OF WELL & CASING PIPE OF BORE WELL IS DONE.
01 Rain Water for Earth

02 Rain Water for Drinking

03 Rain Water for Borewell

Three simple and effective ways to harvest rainwater using precast modular stepwell.
OPTION .01

RAINWATER FOR EARTH:
REGULAR RECHARGING OF DRIED AQUIFERS REJUVENATES EARTH
IDEAL SOLUTION TO WATER LOGGING OR PREMISES WITHOUT STORM WATER DISCHARGE FACILITY

UNIQUE HORIZONTAL FILTRATION MODULE:
64- SPECIALLY DESIGNED 60 MM DIAMETER INLETS TO FACILITATE FAST WATER INFLOW & TO KEEP LARGE OBJECTS LIKE POLYTHENE, LEAVES ETC ON GROUND LEVEL, THIS FACILITATES EASY CLEANING DURING RAINS

BOTTOM MOST MODULE CAN BE ACCESSED FROM TOP END OF CENTRAL SPINE FOR FLUSHING / CLEANING PURPOSES

IT IS ADVISABLE WHILE HARVESTING SURFACE RUNOFF WATER TO HAVE HORIZONTAL FILTRATION UNIT SEPARATE FROM PRIMARY+SECONDARY FILTRATION UNIT, HOWEVER, IT IS POSSIBLE TO COMBINE BOTH UNITS IN ONE

RAINWATER FOR EARTH:
REGULAR RECHARGING OF DRIED AQUIFERS REJUVENATES EARTH
IDEAL SOLUTION TO WATER LOGGING OR PREMISES WITHOUT STORM WATER DISCHARGE FACILITY
RAINWATER FOR DRINKING:
HIGH QUALITY POTABLE WATER AT NEGLIGIBLE COST
BEST SUBSTITUTE TO URBAN DRINKING WATER SUPPLY

OPTION .02 RWD
RAINWATER FOR BORE WELL:
REGULAR RECHARGING OF DRIED AQUIFERS REJUVENATES EARTH
CONTINUOUS DILUTION BY RAINWATER IMPROVES WATER QUALITY OF BORE WELL
TOGETHER WE CAN RESOLVE WATER CRISIS

YOU HELPED US MOVE FORWARD WITH CONFIDENCE
APMC VADODARA

BLUE COAT SOLAN
OUR CLIENTS
J K PAPER  SURAT

JYOTI  VADODARA
OUR CLIENTS

RUPA DYEING & PRINTING  SURAT

SEWA RURAL  BHARUCH
SOMA TEXTILES AHMEDABAD

TRANSPEK VADODARA

OUR CLIENTS
OUR CLIENTS

TORRENT PHARMACEUTICALS MEHSANA

MUNICIPAL CORPORATION VADODARA
ABOVE:
R. AGARWAL'S BUNGALOW. AHMEDABAD

BELOW:
R. J. PARIKH'S BUNGALOW. AHMEDABAD

INSTALLATIONS
ABOVE: GAUTAM ADANI’S BUNGALOW. AHMEDABAD

BELOW: BIDIWALA’S BUNGALOW. AHMEDABAD

INSTALLATIONS
ABOVE:
D. C. GANDHI'S BUNGALOW, AHMEDABAD

BELOW:
VRAJ GARDENS, AHMEDABAD

INSTALLATIONS
ABOVE:
COCA COLA. AHMEDABAD

BELOW:
CADILA PHARMACEUTICALS. AHMEDABAD
ABOVE: SHRI SWAMI NARAYAN GURUKUL, AHMEDABAD
BELOW: POLICE BHAWAN, GANDhinagar

INSTALLATIONS
WE MUST USE OUR FINITE NATURAL RESOURCES WISELY
OUR CONSTANT EFFORTS TO PROMOTE RAINWATER HARVESTING AS A PROMISING SOLUTION
ABOVE: BUILDING MATERIAL EXHIBITION
VADODARA 2006

BELOW: GUJARAT WATER RESOURCE MANAGEMENT SEMINAR. AHMEDABAD 2007
ПРЕДСТАВИТЕЛЬСТВО СТХАПАТЫА ПОМЕЩЕНИЕ

АВТОРЫ

СТХАПАТЫА ЭКСПОЗИЦИЯ 2007

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FURAAT AWARENESS SESSION AT ROTARY CLUB. AHMEDABAD 2007

BELOW:
STHAPATYA EXHIBITION. SURAT 2007

PROMOTION
ABOVE:
TRAINING WORKSHOP FOR SCHOOL STUDENTS. CHENNAI 2007

BELOW:
AEC EXHIBITION. MUMBAI 2007
rain is the primary source of drinkable water available on earth
LETS USE RAINWATER