

Isn't it time you
also
added
more value
to the
construction you are
planning?

Introducing to you the construction technology
being increasingly adopted across continents.
We call it:



(It's more than mere brick & mortar!)

Design, aesthetics, durability, environment - friendliness, construction-speed, cost-effectiveness ...

When it comes to Hydraform, it all fits together!

The Hydraform building system replaces the conventional bricks and mortar by using Hydraform blocks. The other components of the conventional building system remain largely unchanged. Hydraform system is essentially a dry-stacked masonry system that enables speedier construction of high quality, aesthetic and affordable buildings.

Hydraform, the time-tested concept

The Hydraform building system has been in use for over a decade and is the choice of many construction companies, government agencies, NGOs and international agencies worldwide. In India, it is also being used extensively by private builders and developers in Andhra Pradesh, Delhi, Uttar Pradesh, Himachal, Kerala, Orissa and Gujarat among other areas.

The system has been extensively tested for parameters of strength and durability in recognized engineering institutes of South Africa and India. The System is in line with the National Building Regulations. Needless to mention, it is finding ever-increasing acceptability amongst, builders, artisans and of course the people for who the buildings are being built.



The concept revisited

The Hydraform Building System comprises of three primary aspects: The Hydraform Block, the Hydraform Machine and the advantages of interlocked stacking offered by Hydraform.

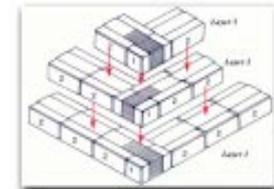
Hydraform offers considerable flexibility

The Hydraform Block is made by hydraulically compressing a mixture of raw earth or Fly Ash and stabilizer (usually cement) in the Hydraform block-making machine. The block has grooves on the top and bottom as well as on the two sides. This geometry ensures a perfect interlock of two consecutive blocks when stacked in masonry to make strong and aesthetic walls, arches and corbels.

The blocks in themselves have a pleasing face-brick finish and provide for pre-pointed straight masonry. The walls can be exposed, plastered or finished with cement paint. Studies to the effect have shown that in India, the artisans using hydraform blocks have exhibited a remarkable speed in adapting to the various applications.

Not only can the Hydraform block be made of different types of raw material, it can also be made to conform to different shapes and sizes. In addition to the standard interlocking blocks, the Hydraform machine can be made to produce different types of blocks viz., Paver Blocks, Reinforcement Blocks, Conduit Blocks and Plain Blocks by using simple customized tools.

The structuring of the blocks is resilient and user-friendly.



Technical aspects of the Hydraform block

As indicated earlier, the blocks are so adaptable to multiple usage & raw material that it would become a monumental exercise to enlist the physical parameters across all types of blocks possible. However, the standard or usual Hydraform block can be made for two wall thicknesses:

	HF 220	HF 115
Wall type	External	Internal
Width	220 mm (9")	115 mm (4.5")
Length	50-240 mm	50-220 mm
Height	115mm (4.5")	115 mm (4.5")
Approx.Weight	11 Kg.	6 Kg.



While block strength is determined by soil type, quantity of cement used and the extent of curing after manufacture, usually Hydraform Blocks of up to 50 -100kg/sq.cm strength can be easily manufactured using 5 to 10% cement in the mix. Indeed, Hydraform blocks of strengths up to 100-250kg/sq. cm can also be made with Fly-Ash, Lime and Gypsum using the FAL-G Technology. Each Hydraform Block HF 220 is equivalent to 3.5 conventional fired bricks in volume. HF 220 can be made in quarter, half & full length. The thermal quality of the Hydraform block can be up to 3 times better than conventional products.

The testing of blocks for technical performance

The Hydraform blocks are tested by scores of authorities and independent testing institutions across the world.

To name a few:

- CSIR
- NCCBM
- Wits University, Johannesburg
- CPWD
- INSWAREB

The details for the tests conducted are available upon request.





The advantages of the system are immense

Hydraform is gaining tremendous acceptability on account of various factors. Apart from the obvious advantages of becoming vertically integrated, as a builder, planner or promoter, you can truly make the economies work in your favour! To name a few advantages:

- Save on costs incurred in transporting bricks to site by producing the blocks at the site itself;
- Alternately offset part of transportation costs by manufacturing the bricks at a site where raw material is abundantly & economically available (say Fly Ash at a thermal-power plant);
- Save on mortar material entirely as it is not required;
- Save on hiring & transporting mortar-making equipment;
- Save on hiring relatively more expensive artisan as the Hydraform system & training allows for attaining early training efficiencies;
- The usable life of the machine is quite high allowing use over multiple projects over time.

There is more to Hydraform than that and there are other issues that can be of tremendous importance to you as a responsible corporate citizen or as an NGO:

- These blocks can also be made using Fly Ash thereby putting this otherwise environmentally damaging thermal-power by-product to an environmentally safe use;
- Contribute towards the skill-enhancement and the economic enhancement of the citizens of the local community;
- Since block-production is done by a high-compression system & water-curing, it obviates the need for depleting coal or fuel-wood resources as required by the conventional brick-burning system.



The Hydraform machine is a true-value proposition

The Hydraform machine comes complete with highly value-oriented process-know-how, training and a host of services. After all, what better proof would there be of the cost of these machines than to see the vast spread of area in which the system is being put to use: From the housing rehabilitation programme for 1600 home-units in Orissa to the construction of earthquake-resistant structures in Gujarat to schools, private homes & office buildings for the value-conscious.

The Hydraform Machine is a robust instrument powered by a diesel engine. The machine is housed on a road-worthy frame to enable it to be transported from site to site hitching it to the back of a truck or a jeep. The machine is available in models: Diesel-operated and Electricity-operated.

MACHINE SPECIFICATIONS

Capacity	150-180 blocks per hour
Manpower	7-10 numbers
Overall dimension (in mtrs.)	2.3 x 1.6 x 1.7
Approx. Weight	1000 Kg.
Approx. Engine rating	13.3 Hp diesel
Chassis type	Road worthy tow frame

Mechanized sieve, mixer, block cutter and other accessories can be arranged on request.





Technical assistance is just a request away

When you procure the Hydraform machine you can access a host of services through our highly trained and motivated technical personnel. Please ask for details on the various services:

- Advise on cost-effective raw material mix design
- Facilitating Soil Testing at technical laboratories
- Block production Training
- Block Testing
- Project Management
- Construction Training
- Equipment installation and servicing

Hydraform on the move ...



Mr. V. Suresh,
CMD, HUDCO
reviewing a
Hydraform Block
at an exhibition.

CPWD Office at Dhaula
Kuan, New Delhi. The
construction has been
done using Fly Ash as the
resource for the
Hydraform Blocks.



Cyclone-resistant
housing
structures in
Orissa made
with Hydraform.
Seen in the
picture is the
Country
Director, CARE
INDIA at the
time of the
inauguration.



Mr. Laurie Baker visiting the Hydraform
Stall at BuildTech seen here in discussion
with Mr. Safaya of HUDCO.

A Hydraform
Block Yard
in Andhra Pradesh.



Factory shed in Delhi.



The earthquake-resistant housing structures
coming up in Dhaulaveera, Gujarat uses Hydraform.



Buildings made with Hydraform under the Sahara
Housing Project at Uttar Pradesh.



The Company behind Hydraform

The Hydraform Group was founded in South Africa in 1988. Today the range of Hydraform products is marketed in over 30 countries. Hydraform relies on constant R&D efforts to enable achieve high construction standards worldwide. Hydraform (India), was set up in 1995 as a subsidiary to cater to India and other nations in the region.



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