UltraSpan Technologies, MB R3T 0M6, Winnipeg, Canada

# Modernization of construction in the NCR of India – with precast



The well-known Indian company Stellar Group which has been successfully working in the construction business for over 25 years is convinced that precast is the future of the building industry in India. To stay ahead, they have expanded their portfolio with a hollow core production area from UltraSpan, a company of the Progress Group, in close cooperation with the Indian subsidiary of the group, Progress Precast India. Even dealing with special circumstances during the Covid outbreak, the companies managed to deliver and install as well as instruct Stellar on the new machinery, which is now benefitting the construction leader in many ways.

With the focus being on commercial and residential buildings, Stellar has developed over 9 Mio. sq. ft. on residential and commercial construction. Major current projects being a residential project of over 16 acres and three commercial projects close to 1.5 Mio sq. ft., are benefitting from the usage of precast concrete elements. The main scope of delivery is being located in the NCR – National Capital Region, so Greater Noida, New Delhi, Gurgon, Goriabad and Gaziabad.



Akshay Sethi, Director of Stellar Group

## Why Precast is the future of building?

"Building in general is becoming troublesome as the shortage of skilled manpower is huge and we feel this problem will increase in the future. So we are of the opinion that precast and the factory based production of it is the only way to reduce the requirement of manpower. With the additional benefit of better quality, time saving and better worker safety.

We believe precast is the best option going forward" states Mr. Akshay Sethi, Director of Stellar Group on the current situation and how it influenced the decision to build with precast and invest in a precast plant.



Stellar Precast belongs to the Stellar Group and is delivering to their construction sites in the NCR from its highly automated production plant.



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### PRECAST CONCRETE ELEMENTS



With 25 years experience the construction company never fails to think ahead and invest in innovation – such as precast.



Building with precast elements reduces material needed, manpower and mistakes on site - all while increasing quality.



With prefabricated elements it takes significantly less time to build.

According to Stellar, in the beginning they had some similar commercial building projects, which lined up in the last years. So moving the focus to constructing with standardized precast also regarding those projects just made more sense. Especially in commercial buildings, as you get a longer span and a clear room / working area. Apart from that, precast has the benefit of reducing the construction time up to 50%, so the elements can be produced under any weather condition in the plant and the machinery can work around the clock, according to the expert from Stellar. In addition the quality of the product is constantly good as it is produced in a highly automated plant. The elements stay in a certain quality that is not achievable with classical construction methods. There are too many factors, that can compromize the quality and with that often the speed of the construction as mistakes need to be mended. Also safety remains a big concerne and, it is way easier to guarantee with producing and building with precast elements.

### Project overview 2021 / 2022

Project name	Size	Status
Stellar IT park	9 lakhs sqft	Completed
Stellar business park	9 lakhs sqft	Completed
Stellar 135	3.6 lakhs sqft	Completed
Stellar 1425	4.5 lakhs sqft	Completed
Stellar 127	2.8 lakhs sqft	Completed
Stellar 1423	3.3 lakhs sqft	In progress
Stellar 1422	9.7 lakhs sqft	Upcoming

### Automated machinery for precast

In 2021 the newest precast machinery has been installed in their plant. With the Ultra Span Extruder and a state of the art concrete sawing machine, the hollow core slabs for the projects can be produced fast and with standardized quality. Presently, two different slab thicknesses are being produced at the plant: 250 mm and 320 mm with the ability to change the size from 100mm to 400mm with easily changeable cassette. Such hollow core slab sizes allow to cover a wide range of construction endeavors satisfying a broad variety of structural requirements in today's demanding projects. The current production capacity is based on four - 145 meters long casting lines. With these newly installed casting beds and the recently delivered hydraulically powered tilting tables from Progress Precast India, the daily output could be increased and product delivered to new projects on time and with impeccable quality.

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### PRECAST CONCRETE ELEMENTS



The extruder from UltraSpan is providing fast and high quality production on beds of hollow core slabs.



Overall four lines with a length of 145 meters are producing hollow core precast elements in the new plant of Stellar Precast.

"What we have seen is that the hollow core machinery of UltraSpan / Progress Precast India in the means of efficiency, compared to other hollow core production machinery, is higher. We saw that the void percentage is much higher and safety is higher. The machine is competitively simpler to understand and handle and can be maintained very easily. Even if any problem comes up, it can be resolved very quickly, so the down time is less and we are very satisfied with it.", states the Project Manager Mr. Gaurav confidently.

There were some hick-ups due to Covid and Progress had to comission this hollow core machinery remotely because of the restrictions. Nevertheless, Stellar could start the production and move on with their projects due to the service provided by Progress and although remotely advised. The local office of the machinery producer could additionally organize a partnering engineering company, which has been sent to support Stellar, complying with the restrictions of course. So even in this difficult times, there was a solution provided by the local office in India belonging to the worldwide renowned Progress Group.

### **Future plans**

"What we are targeting right now, is the commercial projects and the industry construction. We are also getting enquirees from the vendors that need precast solutions for their projects.", says the Project Manager. The warehouse market has gone up, for various reasons, so the market is more and more preferring to build with precast, seeing its convincing benefits especially for commercial buildings. Also the cost of steel is increasing significantly, so the trend is moving from classical buildings to precast buildings in the commercial sector already. "Apart from that, we are planning to expand our precast factories also for residential development.", concludes Mr. Gaurav and is looking forward to an exciting future with precast construction leading the way in all segments of building in India.



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#### FURTHER INFORMATION



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