



Confederation of Indian Industry  
125 Years: 1895-2020

# COVID 19

## Manufacturing and Imports

30 March 2020

### CII Initiatives on Manufacturing Ventilators & PPEs

While the industry has been under severe financial stress due to the lockdown, many companies have come forward to support the Government and stand together in facing the healthcare challenges, which is predicted to become worse in the coming days.

CII has been engaging with the government for the last two months and aligned its membership with their capabilities, resources, and network to meet the rising demands of healthcare in general.

During our regular interaction with the government, hospitals, medical professionals, and many others, CII has prioritised three key products, which will be very critical and will be required in very large numbers. These are:

- a) Ventilators
- b) Personal Protective Equipment (PPE) – primarily Hazmat suit for medical professionals and viziers/goggles and gloves
- c) Masks – both for medical professionals (N95 with 0.3 micron ventilators) and the common man (three-layered)

#### **Ventilators**

The spread of COVID-19 to larger populations will pose challenges to healthcare infrastructure. According to projections of John Hopkins University, if 20-30% of the population gets infected, we would require 2.6 million beds and 1 million ventilators.



Currently, India has 1.3 million beds and around 45 thousand ventilators (current inventory is approximately 12,000 with public hospitals and another 35,000 with private hospitals). Hence, we have a challenge on hand to raise the inventory of more ventilators.

While the import of high-quality ventilators is an option, but increasingly it will be difficult in terms of availability from reliable sources, and the high price points. However, the import option should be open with a stringent quality check to ramp up the inventory for the immediate requirement for the next 1-2 months. But India should take immediate action to be ready with the manufacturing of high-quality ventilators.

Manufacturing of ventilators should be done through multi-pronged actions:

**Action 1:** Maximise the capacity of existing ventilator manufacturing companies whose products are tested and certified.

In case there is a need for capital and other resources, the Government should provide support urgently. This should be done in the coming 15 days.

CII has formed a consortium of existing manufacturers of ventilators and has been discussing with them to understand their issues and challenges.

No/inadequate information on desired specifications of ventilators, demand size, order placement, etc. are bothering this group.

CII will present to the government a comprehensive proposal on support needed to maximize the manufacturing of ventilators by the existing players. CII will work closely with Government to ensure ventilator manufacturing companies ramp up the inventory of ventilators very soon.

**Action 2:** Consortium of existing Ventilator manufacturing companies (including MNCs) and big manufacturing companies in the automotive, defence/aerospace sectors.

The existing manufacturing companies should share technology/know-how with other manufacturing companies who will utilise their plant and machinery to produce the ventilators in large quantities. Compulsory licensing can be invoked in case technology know-how is not passed on to other manufacturing companies. This should be done in next 1 month.

CII has been discussing on a single platform with existing manufactures and potential manufacturers for forging partnerships, and a few partnerships have already happened for Maruti, Bharat Forge, M&M, etc.



CII will periodically present to the government a list of such partnerships between existing players and other manufacturing companies, with projections of volume of ventilators to be manufactured and added to inventory through these tie-ups.

**Action 3:** Consortium of National laboratories/institutions and big manufacturing companies in automotive, defence/aerospace sectors.

DRDO, ISRO, CSIR, and IITs, which have developed prototypes mature enough for testing, should get Industry partner which can start manufacturing. This should be done in the next 3 months.

CII and Society of Indian Defence Manufacturers (SIDM) are working with DRDO to facilitate the transfer of DRDO Developed Technologies to Industry for mass production of various Critical Items. CII is also working with IITs to test and scale up some innovative products developed by them. CII is working with IIT Delhi to explore the manufacturing of Testing Kit that is under testing at Pune Institute of Virology. CII is also working with Principal Scientific Adviser's office to connect with institutions like IIT Kanpur and start-ups that have a very matured and innovative products to explore mass manufacturing.

CII has connected with IIT-M start-ups and VSSC to explore the manufacturing of ventilators for exploring industry collaborations through CSR funding/technology transfer and/or mass production. CII will be soon initiating webinars to connect these start-ups/VSSC with industry for immediate tech transfers.

CII is launching a platform for national laboratories/institutions to share the details of their matured prototypes of ventilators and will facilitate transfer to / partnership with manufacturing companies, which will assess the technologies and go ahead with acquiring/licensing in these technologies for immediate mass production.

### **Personal Protection Equipment (mainly Hazmat Suits & N-95 Masks)**

To treat one Coronavirus affected patient, a hospital needs 300 Hazmat suits for a week. The current availability is very minimal. The special fabric that is required for making these suits is not available in India. Fabrics of desired specifications are available in other countries, and these need to be imported urgently by the big textile/technical textile companies.

The supply of N-65 Masks or Respirator needed for healthcare professionals is very minimal. The special filter that goes into this production, is manufactured by only 2-3 companies globally, and their capacity of supplying the filter in large quantities to India will have difficulty as they are catering to global demands. While efforts should continue to import N-95 masks, India should develop its own technology for the filter. The existing textile and technical textile companies



should get into the manufacturing of masks for common man and partner with other organisations to find an alternative to N-95 filters.

CII has formed a consortium of Textile/Technical Textile companies and has been discussing with them how to start producing large quantities of Hazmat Suits, N-95 Masks and Masks for the common man. They have geared up to ramp up production and import.

CII will present to the government a comprehensive proposal on support needed to maximize the manufacturing of Hazmat suits, N-95 Masks, and other masks by the textile companies. CII will work closely with Government to ensure textile companies ramping up the inventory of these items very soon.

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