Manufacturers in the U.S. are improvising to keep factories humming as the coronavirus pandemic threatens one of the biggest disruptions in memory to supply chains, staffing and demand.

Factories are staggering shifts, banning visitors and installing barriers between workers to protect them from infection. Some executives worry that might not be enough to maintain production as officials across the country advise more people to stay home, and schools and day-care centers shut down.

In Europe, car makers and other manufacturers have suspended production as the intensity of the outbreak there has endangered worker health and snarled supply chains. On Tuesday, Volkswagen AG, the world’s biggest car maker by sales, said it was preparing to shut down most of its European plants, extending the stoppages beyond Italy and Spain. Airbus SE, the world’s biggest plane maker, said it was halting production at its plants in France and Spain for four days, to enact new sanitation measures and retool workspaces to allow more distance between workers.

Such stoppages mean disrupted business for manufacturers, which can’t transfer their work as easily as other industries. “You can’t weld at home. You can’t run a press break from your backyard,” said Stephen Bullock, president of Power Curbers Cos., a paving-machine maker in Salisbury, N.C.

Scandic Springs Inc. in San Leandro, Calif., ramped up production in recent weeks as customers placed bigger orders for the company’s stainless-steel springs as a hedge against supply disruptions. The company extended production to Saturdays and added measures to guard the health of its 40 employees, owner Hale Foote said.

Mr. Foote said late Monday he plans to keep Scandic open despite orders from Bay Area counties that nonessential businesses in the region close beginning Tuesday. He said the company is appealing the order from Alameda County on the grounds that Scandic supplies

Caterpillar is among the companies that have seen a sales decline.

PHOTO: CALLAGHAN O’HARE/BLOOMBERG NEWS

By Austen Hufford and Bob Tita
Updated March 17, 2020 8:24 am ET
essential-service providers including health-care institutions, utility companies and emergency responders. “If we’re shut down, our customers will be shut down,” Mr. Foote said.

The nation’s industrial economy was already on the defensive. Trade tensions, lower domestic oil-and-gas exploration and slack demand for machinery in the ailing farm sector all weighed on production last year. Industrial output fell 1.2% in 2019, according to the Federal Reserve. The 36% expansion in manufacturing output since 2009 hasn’t kept pace with the economy’s overall growth.

Now, the new coronavirus represents a new threat to U.S. manufacturers, along with every other sector of the economy—many of which are also big buyers of manufactured goods. Efforts to stop the pandemic have disrupted global travel and consumer spending at sporting events, malls and restaurants.

The Federal Reserve Bank of New York reported Monday the sharpest drop on record for an index of manufacturing business conditions in the state. A subset of the index that tracks new orders to manufacturers turned negative.

More than a third of manufacturers have already had supplies disrupted by efforts to slow the pandemic, according to a recent survey from the National Association of Manufacturers, and nearly 80% said they expect a financial impact on their business.

Caterpillar Inc. said sales of its machines at dealerships fell 11% globally for the three-month period through February compared with a year before. 3M Co. said adjusted revenue would likely decline for the first quarter. DuPont de Nemours Inc. expects a $200 million revenue hit this year as factories buy less of its nylon resins, enzymes and other products.

U.S. manufacturers say China offers a preview of what lies ahead. The outbreak first disrupted output there in January. Plants were idled after workers were quarantined and unable to report to work. Output at China’s factories slumped 13.5% in the combined January-February period from a year earlier, China’s National Bureau of Statistics said.

That slump drove down sales for U.S. companies with plants in China and created shortages for companies in North America that depend on imports from the world’s largest manufacturing nation.

Some U.S. companies gained as Chinese competitors froze up. Detroit-based Tompkins Products Inc., which makes auto transmission parts, recently secured an order to make a component for a car maker that was unable to obtain it from China because of the pandemic. Operations director Tracy Skupien said she hopes the company, which employs 325 people at two plants, will be able to fill the order for 100,000 components as efforts to contain the virus in the U.S. disrupt more aspects of life and commerce.

“It would only take a bunch of people getting sick for a couple of days to put us in a bad situation,” Ms. Skupien said.

In New York’s Westchester County, a hot spot for the domestic outbreak, Zierick Manufacturing Corp. is adjusting work shifts for those of its 60 workers whose lives have been disrupted by school closings and the interruption of other services.

“We have to be flexible, or we won’t survive,” said Gretchen Zierick, whose company makes electronic connectors for circuit boards.

Manufacturers are also canceling visits to conferences and client’s plants that they count on to generate sales. Fullerton Tool Co. of Saginaw, Mich., has asked customers that have banned outside visitors to entertain sales pitches over FaceTime instead, President Patrick Curry said.
Sensera Systems Inc., which makes security cameras for construction sites, said the information-technology managers that typically sign off on its sales are too busy helping their companies set up remote work to complete orders they had agreed to place.

“There is a disruption in decision-making,” Sensera Chief Executive David Gaw said.

John BJ Louws, president of Louws Truss Inc., a maker of wooden-support triangles for home construction, said he has worked constantly over the past few weeks to adjust operations as the pandemic intensifies.

His customers haven’t canceled orders, he said, but he is concerned that construction could slow if market turmoil discourages people from buying new homes. Mr. Louws said he won’t be able to install two semiautomated saws he ordered recently until the pandemic abates.

He has barred his 130 workers from traveling among the company’s four facilities scattered around Washington state, center of one of the most intense domestic outbreaks. He placed a half-hour gap between morning and afternoon shifts that used to overlap. The company closed doors between factory workers and designers who used to mingle in the same building.

“We have to build and deliver our product,” he said. “There is so much uncertainty.”

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