Scaffolding Systems Raises Contractor to New Heights

Minneapolis’ Tom Donnelly increases crew productivity through his new scaffolding systems.

By: Stephen K. Hursh

Minneapolis’ Tom Donnelly, President of Donnelly Stucco Co. and a long-time AWCI member, has added a few “key players” to his team this year. They’re big, up to 50 feet long x 7 feet wide. They can be used on large or small jobs and they help to quickly get the job done. Most importantly, they get the job done safely!

The “key players” Donnelly has added are called mobile elevating work platforms. They are proving to be the fastest, most versatile and safest way to get workers and materials up to almost any height, on almost any project! As a result, they enable all sorts of contractors to realize at least 25% to 30% production increases and/or cost reductions.

These work platforms will provide a safe, convenient way to work up to at least 330 feet high, and to areas that in many cases are very costly or impossible to reach with conventional scaffolding or other lifting equipment. Donnelly Stucco Co. recently purchased four large mobile elevating work platforms, with 50 foot long platforms, for exactly this type of job.

In addition to the four “machines” purchased, Donnelly is renting two more from their Minneapolis-based supplier, Scaffold Service, Inc. All six machines are being used by Donnelly on their 210,000 sq.ft. exterior Dryvit “Outsulation” retrofit of the 210 ft. high, Skyline Towers building in St. Paul, MN.

Use of the six mobile elevating work platforms in place of conventional scaffolding will enable Donnelly’s team to complete the project in a total of only four months!

Tom Donnelly explained, “The original projected completion date for this two-phase project was September 1, 1986. However, after meeting with the scaffold supplier, we determined that we could actually finish the entire project about the end of October, 1985, if we used the mobile elevating work platforms.” Donnelly continued, “The flexibility and safety of the platforms is making this happen.”

These systems are portable, chassis mounted work platforms that are easily towed or trailered to and around the jobsite. Each model comes to you as...
one simple, pre-assembled piece of equipment. Mast tower erection is about the only assembly required.

All models give the contractor large, unobstructed work platforms. Depending on the brand and model, they range in size from 4 to 5 feet wide by 16 feet long to 55 feet long, and are surrounded by safety fencing as necessary. The platform work areas are free from tubular frames and braces, which allows total freedom for work to be easily performed and for materials to be conveniently stored on the same work platform!

“In addition to the four plasterers and one tender, we can put a full day’s work in polystyrene, primus and mesh on each 50 ft. platform. We carry a water barrel and all the sundries, besides” explained Donnelly. In many cases, you can eliminate the need for other lifting equipment, which would otherwise be used to stock materials.

The large work platforms are electrically powered, rack and pinion driven up and down either single or twin mast towers. The mast Towers consist of individual 5 foot long mast sections, which can be erected and bolted together quickly and easily, from the platform-as you go up!

Depending on the brand and model, each 5 ft. mast section weighs as little as 125 lbs., or as much as 330 lbs. With the lighter mast sections, only two men are needed to erect or dismantle the mast towers. With the heavier mast sections, an erection hoist must be used on the platform, for lifting and placing the mast sections into place on the mast tower.

As an example of a typical erection, two men can erect a twin mast, 50 ft. long work platform, to a height of 100 feet in one work day, or 16 man hours.

It normally takes 60 man hours to erect a 50 ft. long by 100 ft. high section of conventional scaffolding.

Consequently, these platforms can be erected in less than 27% of the time required to erect conventional scaffolding. A contractor who uses one can immediately realize a substantial erection time and labor cost savings.

According to Rich Eaton, project supervisor for Donnelly’s Skyline Tower project, “It would have taken four times longer to scaffold and dismantle this job with conventional scaffold, than it’s taking us with the work platforms.”

Generally, the platform models differ in physical size, weight, payload capability, free-standing heights and anchored heights. As a result, contractors can select the model that may be exactly what is needed for their specific needs.

For instance, one small model weighs 3300 lbs., has a 16 ft. long platform and carries a payload of 1100 lbs. to a free-standing working height of 65 feet or to an anchored height of 330 feet.

One large model weighs 10,500 lbs. has a 55 ft. long platform and carries a payload of 6400 lbs. to a free-standing working height of 32 feet or to an anchored height of over 330 feet.

Productivity Increases . . .

No matter which model is used, once erected, the work platform, crew and materials can be moved up and down the mast towers at a speed of 14 to 24 feet per minute, just by pushing a button. According to Rich Eaton, “As a result, our crews are definitely less fatigued.”

A contractor’s employees can spend much less time moving themselves and
materials than with other systems, and more time can be devoted to production. In turn, productivity increases dramatically.

Tom Donnelly stated, “This system lets us put two shifts on this job. We’re working from 4 A.M. until 8:30 P.M. We are able to put lights right on the platform and wherever the guys are working, the lights are right in front of them at all times.”

Each platform is also equipped with 110 volt outlets. “All the power you need is right on the platform. We don’t have to string any cords down the side of the building,” said Rich Eaton.

As Tom Donnelly stated, “All of these features enable our four man crew to come down 24 stories, all the way from top to bottom, with the finish coat and without restocking, in only one day.” As Rich Eaton says, “This is a real benefit because we have no “cold joints” in an entire 210 ft. drop.”

According to Donnelly, “It doesn’t make any difference whether it’s day or night, everything, including production, stays the same.” Donnelly continued, “At any given time, on the six machines we’ll have caulkers, sheet metal people, lathers and plasterers working, with some dismantling, moving and erection going on at the same time.”

Proven Safe . . .

“All this is possible because the platforms are stable and safe. We had guys that were afraid of heights until they worked from these platforms. Now they feel secure, relaxed and they work more efficiently,” stated Donnelly. Another expert opinion comes from Steve Caouette, Donnelly’s plastering foreman. He says, “No matter how high we are, it feels like we’re working on the ground.”

This type of system is safe. First of all, this system is structurally designed to meet or exceed ANSI A92.3 in that “All structural load-supporting elements of the work platform shall have a structural safety factor of not less than two, based on the minimum yield strength of the material.”

Secondly, the major components are built of certified steel and all welded construction. The platforms are completely manufactured according to design. As a result, there are few components to handle and to erect.

As a result, on-the-job erection is simple and nearly fool-proof, because there are no loose scaffold braces, jacks, locking pins, etc., which can easily be forgotten during scaffold erection and can result in a potentially life-threatening situation.

Other safety features which are typical of all brands and models are:
1. Two disc-braking electric gear motors per platform drive the platform up and down. Each motor is capable of holding more than the full rated payload. 2. As an anti-free fall device, each motor has a centrifugal braking system that will control platform descent to about 20 feet per minute, with or without power. 3. Automatic limit switches prevent platform override at the top of the mast tower.

According to Tom Donnelly, “They are the safest, largest, load-supporting work platforms in the industry.”

1. ANSI A92.3-1980, 4.2.2.1