



Manhole Cone Forming Systems



Cone Forms Engineered to Last

- Wetcast
- Eccentric Cones
- Concentric Cones
- Cones with Extended Risers
- Transition Cones

Heavy steel construction designed for strength, durability and performance

Afinitas is known for bringing together the top engineering and manufacturing expertise in the industry to build best-in-class precast forming systems. Our wide range of quality products are backed by knowledgeable and responsive customer sales and manufacturing team members who are there to assist you throughout the life of your form. And to that point, our forms are built to last. We combine heavy-duty steel with an innovative approach to manufacturing that will ensure we can help you take your business where you want to grow.

Manhole products are a core competency of the Afinitas team. We have been trusted for decades to engineer forms for a wide variety of manhole products, including:

- Eccentric Cone Forms
- Concentric Cone Forms
- Slap Top, Transition Slab, Base Slab Forms
- Extended and Straight Base Forms
- Riser Forms
- Drop Base and Drop Riser Forms
- Single Pour Grade Ring Forms
- Battery Grade Ring Forms
- Manhole Joint Rings



Manhole Cone Form



Manhole Base Form



Manhole Riser Form

 **Afinitas is your source**
for Wetcast Forming Systems.

Contact our team at
+1 641-394-4111
or email rfq@afinitas.com

Eccentric Cones

Manholes with eccentric cones are commonly used in infrastructure projects. Eccentric cones offer easier access for maintenance, increased diameter for improved maneuverability for workers to perform tasks, and versatility in placement as the cone can be rotated as needed to avoid obstacles that can hinder installation. Afinitas has the expertise to assist in your eccentric cone production with forms that are extremely durable and help ensure consistent quality.

The Afinitas Advantage

- Manhole Cone Diameters: 42" through 72"
- Heights: 24" through 60"
- Top Openings: 24" through 36"
- Top wall thicknesses: 5" through 8"
- Bottom wall thicknesses: 5" through 8"
- Two-piece design with toggle clamps, seam bars and alignment pins
- Mechanical collapsing inner core
- Welded pallet retainer lugs



Standard Manhole Cone Form

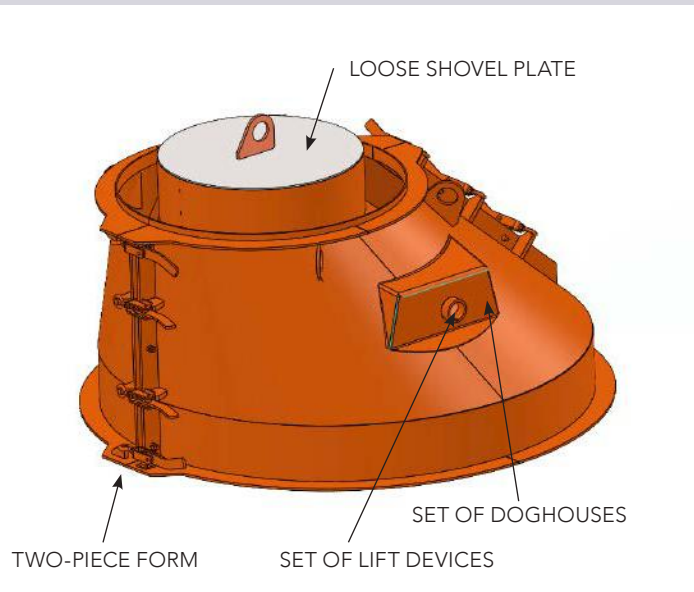


Standard Manhole Cone Form

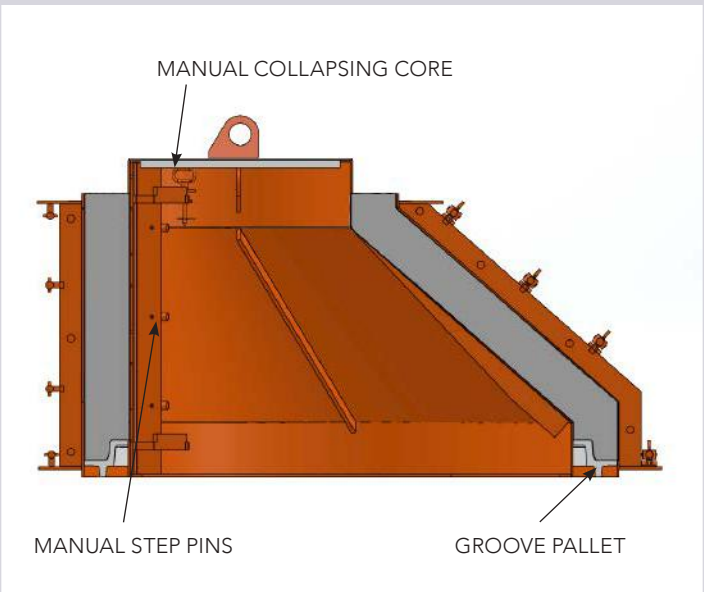


End Product

Standard Manhole Cone Form



Section View Standard Manhole Cone Form



Concentric Cones

With concentric cone products, the access hole is located in the center of the cone. This requires workers to use a portable ladder to access the manhole. While this design is generally less safe and efficient, the concentric cone can be a more economical choice. Whether you are making products with a simple straight connection or something more complex, Afinitas has the forming expertise to support your manhole products.

The Afinitas Advantage

- Manhole Cone Diameters: 42" through 72"
- Heights: 24" through 60"
- Top Openings: 24" through 36"
- Top wall thicknesses: 5" through 8"
- Bottom wall thicknesses: 5" through 8"
- Two-piece design with toggle clamps, seam bars and alignment pins
- Mechanical collapsing inner core
- Welded pallet retainer lugs



Above and below: Two-Piece Concentric Cone Forms



End Product



Eccentric / Concentric Cone with Extended Riser Sections

Eccentric and Concentric manhole cone forms with extended riser sections can be used in precast concrete manhole production when the standard riser section length is not sufficient to meet the required depth or elevation of the manhole. We offer added features like pallet retainer pins that will make it simple to produce manhole products to the exact specifications and heights needed.

The Afinitas Advantage

- Manhole Cone Diameters: 42" through 72"
- Heights: 24" through 60"
- Top Openings: 24" through 36"
- Top wall thicknesses: 5" through 8"
- Bottom wall thicknesses: 5" through 8"
- Two-piece design with toggle clamps, seam bars and alignment pins
- Mechanical collapsing inner core
- Welded pallet retainer lugs



Above and below: Two Piece Concentric Cone Forms with Extended Riser Section



Pallet Retainer Pins to Produce Variable Height Products



Eccentric / Concentric Transition Cone

We engineer our eccentric and concentric transition cones to exacting standards to ensure your product provides a smooth transition when two different size risers are needed. We are experienced in designing cone forms to accommodate pipes of different sizes and built to maintain the same flow capacity as the pipe.

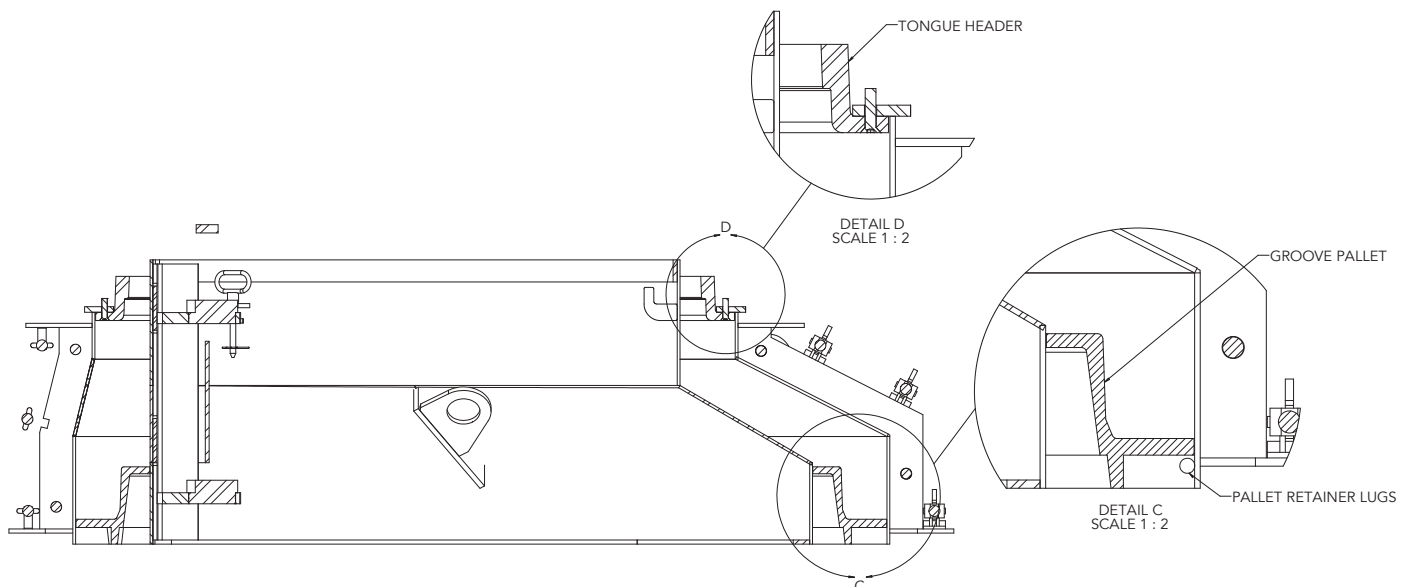
The Afinitas Advantage

- Manhole Cone Diameters: 60" & 72"
- Heights: 24" through 60"
- Top Openings: 48" & 60"
- Top wall thicknesses: 5" through 8"
- Bottom wall thicknesses: 6" through 8"
- Two-piece design with toggle clamps, seam bars and alignment pins
- Mechanical collapsing inner core
- Welded pallet retainer lugs



Two Piece Eccentric Transition Cone Form

Transition Cone Section View



Eccentric / Concentric Cone with Quick Strip Sub-Base

Why Choose the "Quick Strip" Option?

By manually moving the "Quick Strip" levers from right to left, found at the bottom of the sub-base, the inner core is collapsed, and the step pins (if step pins are required) are retracted. This means you don't have to handle the inner core or individual step pins. This makes the form stripping process simpler and safer.

The Afinitas Advantage

- Manhole Cone Diameters: 42" through 72"
- Heights: 24" through 60"
- Top Openings: 24" through 36"
- Top wall thicknesses: 5" through 8"
- Bottom wall thicknesses: 5" through 8"
- Two-piece design with toggle clamps, seam bars and alignment pins
- Mechanical collapsing inner core
- Welded pallet retainer lugs

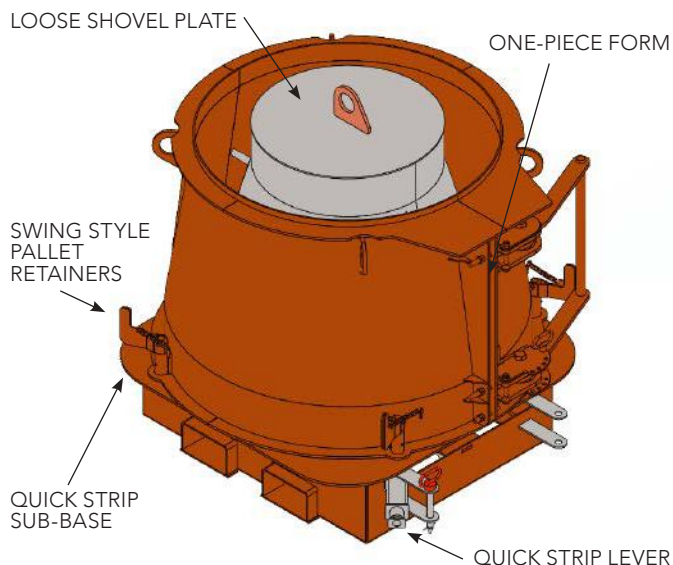


Two Piece Eccentric Cone Form with Quick Strip Sub-Base



One Piece Eccentric Cone Form with Quick Strip Sub-Base

Additional Features



Quick Strip Sub-Base (Top lever controls manual step pin movement plus bottom lever controls manual core collapse)

Eccentric & Concentric Cone with Quick Strip Roll Back Sub-Base

Why Choose the Quick Strip — Roll Back Option?

By manually moving the “Quick Strip” levers from right to left, found at the bottom of the sub-base, the inner core is collapsed, and the step pins (if step pins are required) are retracted.

Form doors are manually rolled open/close. This means you would NOT handle the inner core or individual step pins and there is no need to handle the outer form. This makes the stripping process simpler and safer.

The Afinitas Advantage

- Manhole Cone Diameters: 42" through 72"
- Heights: 24" through 60"
- Top Openings: 24" through 36"
- Top wall thicknesses: 5" through 8"
- Bottom wall thicknesses: 5" through 8"
- Two-piece design with toggle clamps, seam bars and alignment pins
- Mechanical collapsing inner core
- Welded pallet retainer lugs



Roll-back Form Doors with Seam Flat Bars, Seam Alignment Pins and Pull Handles



Quick Strip Sub-Base (Top lever controls manual step pin movement plus bottom lever controls manual core collapse)

Additional Form Options



Vibrator mounting brackets (various make/models to choose from). Air or electric vibrators are also available.



One Piece Form Design. Outward/Inward Facing Dog Houses. Dog Houses are used to provide sufficient concrete cover over lift inserts.

Manual lift hole blockout pins or lift insert assemblies (Several make/models to choose from)



A LOK



PRESS SEAL



A LOK



M.A. INDUSTRIES & LANE INTERNATIONAL



Swing Style Pallet Retainers for One Piece Forms

Did you know Afinitas offers a wide range of Concrete Accessory Products and Concrete Curing Systems?

Contact your local Afinitas sales representative to learn more.

Additional Core Options



Flat Shovel Plate (Loose)



Hydraulic Core Collapsing with Hydraulic Step Pins
Available Bolt Down Shovel Plate (Offered on Hydraulic Core Collapsing / Hydraulic Steps).

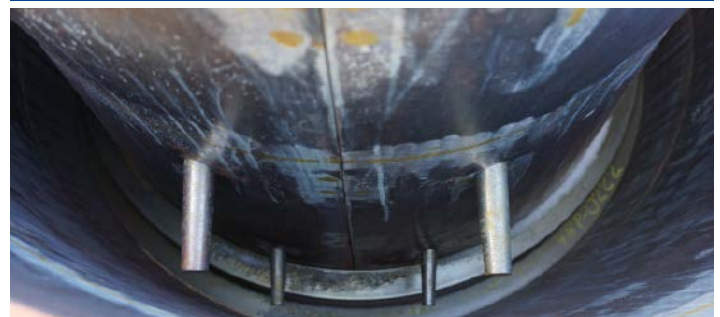
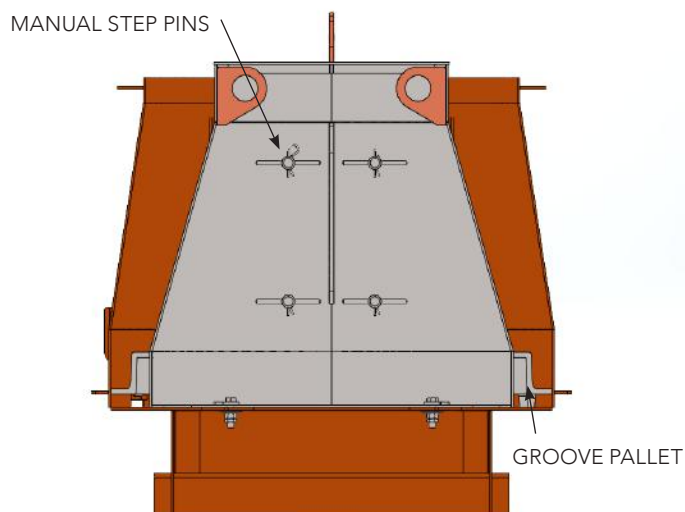


Solid Tapered Core with Quick Strip Sub-base

Options:

- 1) Manual 20 Ton Bottle Jacks for Strip Out
- 2) Mounted Hydraulic Cylinders for Jack Strip Assist
- 3) Groove Pallet, Bolted to the Sub-base

Section View Additional Cone Features

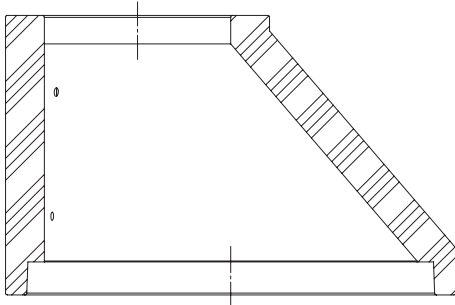


Manual Step Pin Assemblies or Cast-in Plastic Break-off Step Inserts. Several make/models to choose from.

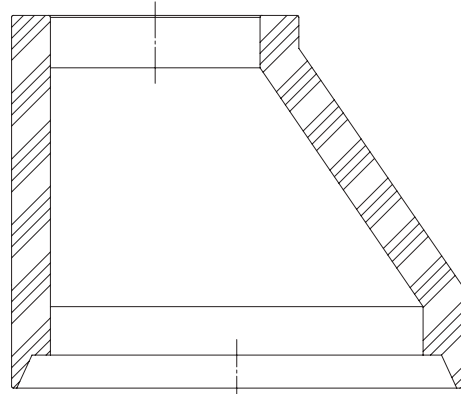


Manhole Cone

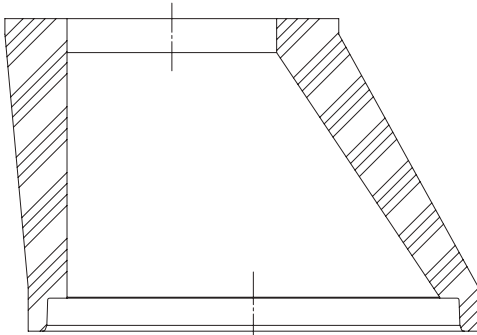
Isometric Views



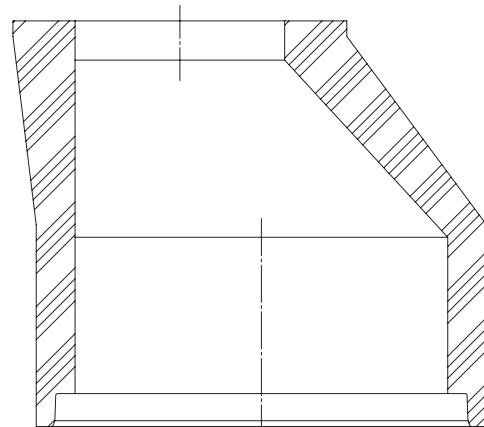
ECCENTRIC CONE



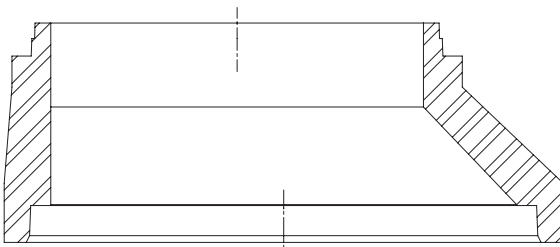
ECCENTRIC CONE W/RISER



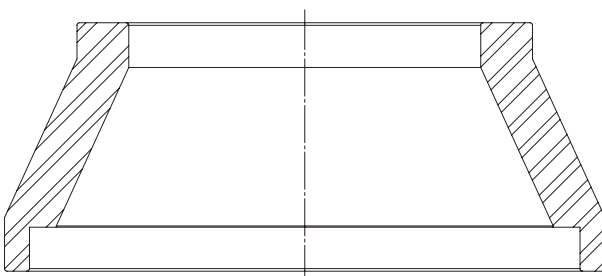
ECCENTRIC CONE



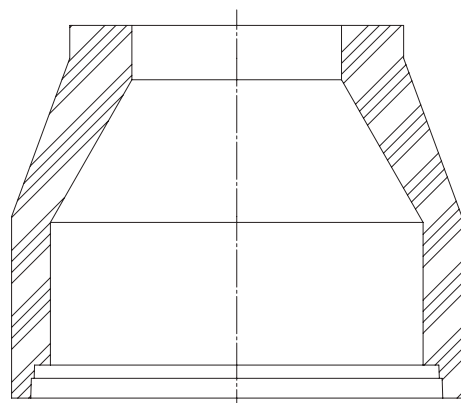
ECCENTRIC CONE W/RISER



ECCENTRIC TRANSITION CONE



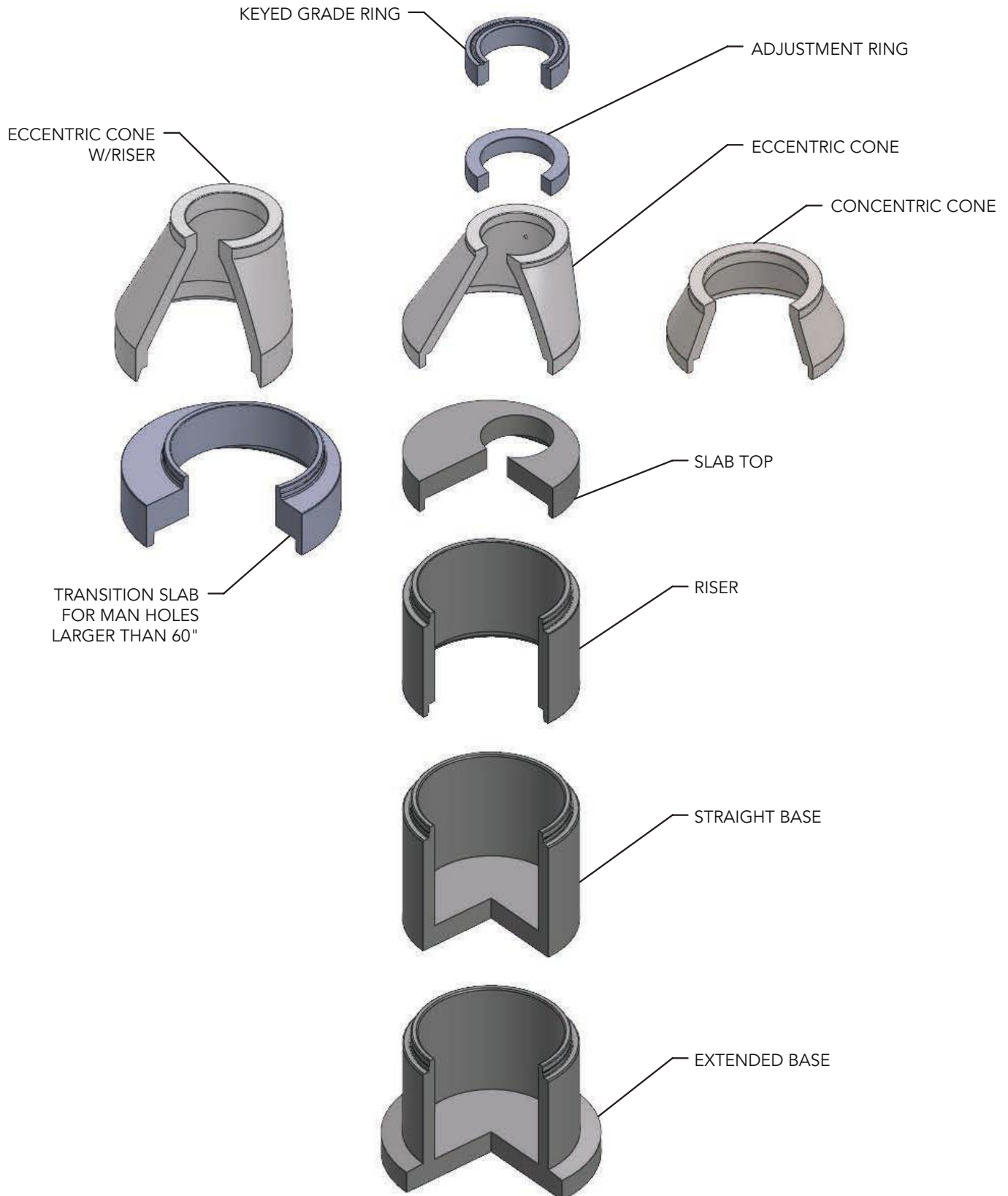
CONCENTRIC CONE



CONCENTRIC CONE W/RISER



Manhole Cone Stack-Up



Introducing SmartRoll™ Intelligent Safety Brake for Controlled Form Roll-Overs

With SmartRoll, you control the roll-over process. Unlike traditional manual methods that utilize form trunnions and crane/hoists to flip the product, sometimes relying on sand piles or similar materials to cushion the roll-over, Afinitas offers an innovative, simple-to-use friction brake system to reduce roll-over speed and momentum. With swinging motions nearly eliminated, operations can be performed faster with fewer safety risks.

Why Choose SmartRoll™?

Reduce the Risk from Form Roll-Overs. Why put your employees or equipment in harm's way? Our adjustable, friction brake controller is designed to safely reduce the speed of form roll-overs before they become a hazard to employees, form equipment or your production schedule.

Built for Ultimate Control

We engineered our controllers with the operator in mind. They are uniquely outfitted with special replaceable urethane inserts that have a high load-bearing capacity making it easy to apply the exact amount of torque required to produce a very consistent and controlled roll-over.

Limit Wear and Save Money

Eliminating the forces of violent roll-overs greatly reduces the stress on your crane equipment and helps prevent damage to your forms saving on repair and replacement costs. Furthermore, our replaceable urethane insert lessens steel-on-steel contact and helps avoid more expensive replacements of trunnion shafts.

In-Stock Selection

We stock the three sizes listed below and their replacement parts.

- **Small Controller** – Part # 1000-699
- **Large Controller** – Part #1000-700
- **XL Controller** – Part # PD-HD-0693

Watch the SmartRoll™
Intelligent Safety Brake Video



SmartRoll™ installed on form



SmartRoll™ can reduce form swinging by up to 90%

SmartConnect™ Cordless Hydraulic Power System for Collapsible Cores

Precast concrete forms with collapsible cores make it easier to remove the product from the form. However, powering up the hydraulics to retract and expand the core can be a hassle. Typically a large cart carrying a power unit, power cords and hoses must be wheeled to the form. The hoses must be attached to the hydraulics on the form, the unit must be plugged in and once the core moves, everything must be disconnected before the cart can move to the next form. This process not only takes time but it wastes time that could be spent working on multiple forms at once.

Introducing SmartConnect™ *

An Intelligent Bolt-On Power Unit for hydraulic collapsible cores. With SmartConnect™, you have a self-contained hydraulic power unit that is mounted directly on the form. There are no electric carts or cords. The unit is powered by a standard 20 volt cordless drill that uses the same hydraulics to operate the core to open and close.

Benefits of SmartConnect™

- Save time — at least 10 mins. or more per form!
 - No wheeling of carts around the plant
 - No hoses and cords to connect and disconnect
 - No more waiting — all you need is a cordless drill to operate the unit, allowing you to work on many forms at once
 - Ultimately, your strip-out and set-up will go faster
- Increased Safety
 - With no electrical cords strung throughout the plant, tripping hazards are reduced
 - Minimizes potential electrical shock hazards if water is present
- Space Saver
 - Eliminating the bulky cart means more open floor space in an already equipment-packed area
- Flexible
 - Works on Afinitas forms up to 7' x 7' boxes and manhole form diameters up to 72"
 - Retrofit your existing forms or add to new Afinitas form purchases
- Quick Payback
 - SmartConnect costs significantly less than a 110V hydraulic cart system
 - When you calculate the productivity gains and reduced safety risks, the system pays for itself in no time (in most cases 3 years or less).

* patent-pending technology



SmartConnect™ is mounted directly on the form to power the collapsible core hydraulics.



The self-contained unit is not dependent on any other equipment except a standard 20V cordless drill.

Watch the SmartConnect™
Cordless Hydraulic Power
System Video





Manhole Production
Additional Products

Afinitas brings you the industry's best formwork and a whole lot more.

Afinitas is the premier platform of precast concrete infrastructure equipment and services.

With decades of experience in the pipe and precast concrete markets, we provide manufacturers around the world with the gold standard in precast concrete product production equipment, highly engineered drycast and wetcast forms and a wide variety of concrete accessories.

Our combined strengths mean more concrete machinery engineering resources, manufacturing know-how and pipe and precast concrete industry experience is ready to help you create the ideal production systems for your infrastructural concrete product needs.



SmartSet™ Curing Systems

- Next-gen and basic direct-fired steam generators
- Controls and airflow systems
- Misting and drying components
- Kilns, piping, moving floors
- Dedicated tech team and service



Cone Cages from Haala Industries brand



Lifting Anchors, Fixation Inserts and other precast accessories

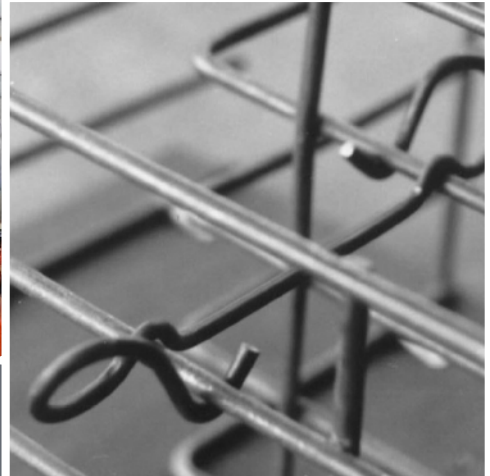


Manhole Cone Forming Systems

Equipment & Automation



Concrete Accessories



Forming Systems



Intelligent Infrastructure Solutions
Visit www.afinitas.com to learn more.

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Intelligent Infrastructure Solutions

Afinitas is a global, comprehensive and customer-oriented equipment, automation, forming and accessories platform for precast concrete and infrastructural products.

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