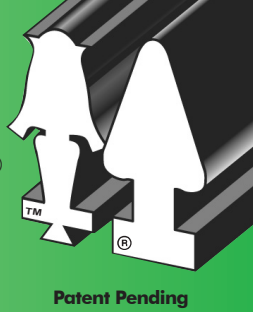




The Company With Connections<sup>®</sup>



**HOOP STEEL REINFORCEMENT SUPPORTS**

# HOOP SUPPORTS

## HOOP SUPPORTS

This tough, injection molded, polypropylene part is designed to hold hoop steel reinforcement securely in position in the form. Just drill a 1/4" hole in the core and insert the gray hoop steel holder. The steel hoops are snapped into the cradle on the end of the hoop support where they are securely held in place during the pour. The serrated locking mechanism part of the hoop support easily snaps off when the form is stripped out.

This product was developed a few years ago after ASTM C-478 was revised to state, "Traditional welded wire fabric reinforcement could be replaced with continuous steel hoop reinforcement up and including 48" diameter manhole risers and conical tops."

## MATERIAL

The **A•LOK HOOP SUPPORTS** are made from tough polypropylene. It is best to store these parts at room temperature for ease of use. Do not store parts in direct sunlight or cold temperatures.

## KEY ADVANTAGES

The **A•LOK HOOP SUPPORT** is an economical method to support hoop steel reinforcement.

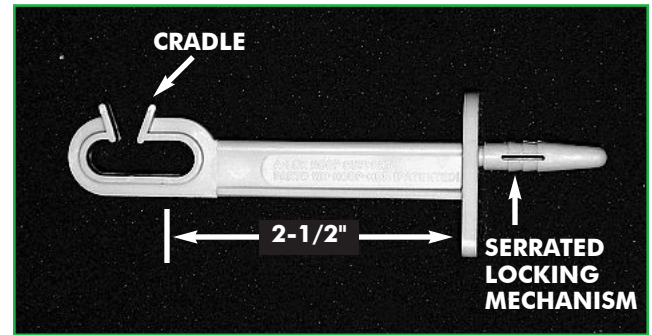
With the rising cost of steel reinforcement now may be the time to consider using Hoop steel reinforcement for risers and cones, held in place by A•LOK HOOP SUPPORTS. Please review chart below to see actual savings comparison in 2015.

### PRICE COMPARISON Welded Wire Fabric Cage -vs.- Hoop Reinforcing

| Section     | Ft. Hoop  | \$ Hoop/Ft. | Cost Hoop | Cost WWF | Savings |
|-------------|-----------|-------------|-----------|----------|---------|
| 1' 0" Riser | 28.26 Ft. | \$0.084     | \$2.37    | \$3.93   | \$1.56  |
| 2' 0" Riser | 28.26 Ft. | \$0.084     | \$2.37    | \$7.86   | \$5.49  |
| 3' 0" Riser | 42.39 Ft. | \$0.084     | \$3.56    | \$11.79  | \$8.23  |
| 4' 0" Riser | 42.39 Ft. | \$0.084     | \$3.56    | \$15.71  | \$12.15 |
| 5' 0" Riser | 56.52 Ft. | \$0.084     | \$4.75    | \$19.64  | \$14.89 |
| 6' 0" Riser | 56.52 Ft. | \$0.084     | \$4.75    | \$23.57  | \$18.82 |

Notes:

1. These price comparisons are strictly raw material (steel reinforcing) costs.
2. Labor to manufacture cage/hoop and spacers in position are not included.



**A•LOK Hoop Steel Support**



**Hoop Supports Supporting Hoop Steel Reinforcement**

## PERFORMANCE STANDARD

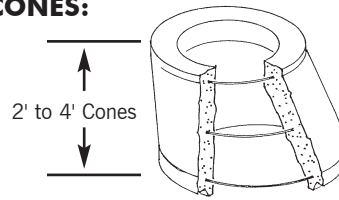
The **A•LOK HOOP SUPPORT** meets or exceeds the following ASTM requirements.

| Physical Properties                         | Metric       | English                   | Comments                                |
|---|--------------|---------------------------|---|
| Density                                     | 0.902 g/cc   | 0.0326 lb/in <sup>3</sup> | ASTM D792                               |
| Melt Flow                                   | 100 g/10 min | 100 g/10 min              | 230°C/2.16 kg-L;<br>ASTM D1238          |
| Mechanical Properties                       | Metric       | English                   | Comments                                |
| Tensile Strength @ Yield                    | 27.6 MPa     | 4000 psi                  | ASTM D638                               |
| Elongation at Yield                         | 4.00%        | 4.00%                     | ASTM D638                               |
| Flexural Modulus                            | 1.45 GPa     | 210 ksi                   | 1% Secant,<br>0.05 in/min;<br>ASTM D790 |
| Izod Impact, Notched                        | 0.534 J/cm   | 1.00 ft-lb/in             | 73°F; ASTM D256                         |
| Thermal Properties                          | Metric       | English                   | Comments                                |
| Deflection Temperature at 9.46 MPa (66 psi) | 123 °C       | 253 °F                    | Unannealed;<br>ASTM D648                |

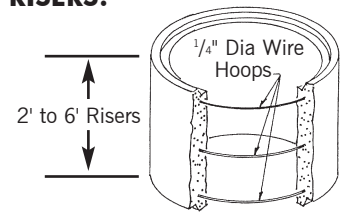
## ● INSTALLATION INSTRUCTIONS

Preparing Core to mount hoop supports – Best results can be achieved by: Take care when drilling the 1/4" holes in core for mounting each A•LOK HOOP SUPPORT, to achieve an accurate size hole. Start with a 1/8" pilot hole or use a magnetic drill to help assure accurate size as well as a clean sharp edge on the drilled hole. Manhole risers and conical tops up to 24" in height should have no less than two hoops of steel wire. Suggested: 4 (four) A•LOK Hoop Supports for each hoop would require drilling 8 holes in the core. For heights greater than 24" and up to and including 48" no less than 3 hoops of steel reinforcement shall be used. Three hoops will require 12 holes be drilled in the core to hold the 12 hoop supports, 4 for each hoop. For heights between 48" and 72" 4 hoops of reinforcement will be required. See hoop steel detail drawings.

### CONES:



### RISERS:



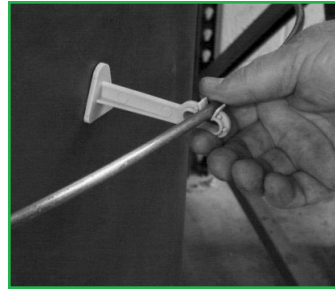
**A-LOK SUGGESTS 4 HOOP SUPPORTS TO HOLD EACH STEEL HOOP SECURELY IN PLACE.**



**STEP 1:** Align locking mechanism into drilled hole.



**STEP 2:** Insert locking mechanism into drilled hole.



**STEP 3:** Align Hoop in Cradle all the way around.



**STEP 4:** Ready for pour.

## ● REINFORCEMENT POSITIONING

1. Hoop wire size risers and cones: Steel hoop wire shall have a maximum cross section diameter of 0.250 inches.
2. Hoop diameters for cones and risers will be such that the hoops are cast into the middle 1/3 of the wall.
3. Hoop position top to bottom risers and cones: A hoop will be located in each end quarter of the riser or cone with a minimum distance of 1 (one) inch from the shoulder. The 3rd or middle hoop shall be located from the shoulder of the riser or cone a distance equal to one-half the section height + or - 6 inches.
4. The concrete cover over the hoop reinforcement in the wall section shall be no less than 3/4".

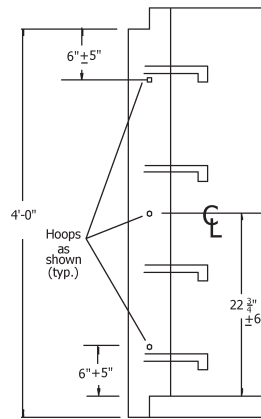
Refer to ASTM C 478-15 Section 14.5

### BEST PRACTICES FOR PLACING CONCRETE

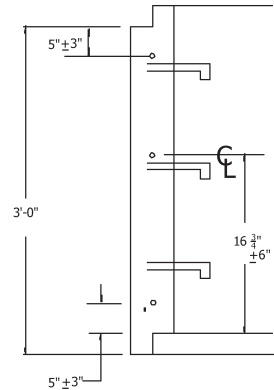
The form should be filled slowly to avoid adding any additional energy to the mix, causing unwanted segregation or shifting of reinforcement, block outs or inserts. Care should also be taken when using any internal vibrators around hoops or hoop supports to avoid contact that could change the position of the hoops or break off hoop supports.

### HOOP STEEL DETAIL DRAWINGS FOR RISERS WITH STEPS

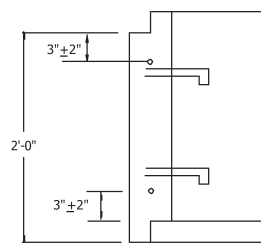
**NOTE: DIMENSIONS ARE SHOWN WITH A TOLERANCE SO YOU CAN AVOID STEP INSERTS AND LIFT PINS.**



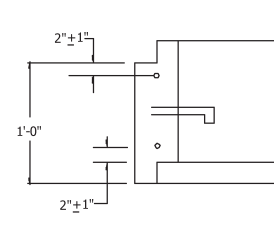
SECTION A-A (4' RISER)



SECTION A-A (3' RISER)



SECTION A-A (2' RISER)



SECTION A-A (1' RISER)

**ANY QUESTIONS REGARDING A•LOK HOOP SUPPORT INSTALLATION, PLEASE CALL 1-800-822-2565**