## AutoTight Tie-Down Systems

Commins Manufacturing Inc.

## Coupler Nuts

Coupler nuts connect threaded rod to form a continuous rod system.
Straight couplers have the same thread on both ends.
Coupler Nut Reducers have different diameter threads on each end.
Thread pitch is Unified National Coarse (NC or UNC).
Coupler nuts are available to fit rod from 1/2"-13 through 2"-4.5 NC.

## Identification:

## Straight Coupler:

## Example CN-9

CN = Coupler Nut,

$$
9=\operatorname{rod} \text { Size in } 9 / 8 \text { inch }=1-1 / 8 " \text { dia. }
$$

Grade: Standard Coupler Nuts are ASTM A563 Grade A Grade 2 High Strength Couplers are ASTM A563 Grade C Over $1-3 / 8$ " are Grade 5
Sighted couplers have one or more holes drilled to aid installation.

## Installation:

Thread coupler onto rod until the rod can be seen in the sight hole. Thread the next rod until it can also be seen through the sight hole. A nail inserted into the sight hole can be used for a temporary stop.

Note: Full strength is achieved with thread engagement equal to a standard nut. This is typically one rod diameter

## Options:

Oversize threads in coupler nuts for use with galvanized rod are available. To specify add a suffix after the product. Example CN-6 FHDG. This provides an oversize end to fit HDG rod. Contact factory for details.

## Code Acceptance:

| Standard Couplers |  |
| :---: | :---: |
| Model Number | Rod Ø <br> Both Ends |
| CN-4 | $1 / 2^{\prime \prime}$ |
| $\mathrm{CN}-5$ | $5 / 8^{\prime \prime}$ |
| $\mathrm{CN}-6$ | $3 / 4^{\prime \prime}$ |
| $\mathrm{CN}-7$ | $7 / 8^{\prime \prime}$ |
| $\mathrm{CN}-8$ | $1{ }^{\prime \prime}$ |
| $\mathrm{CN}-9$ | $1-1 / 8^{\prime \prime}$ |
| $\mathrm{CN}-10$ | $1-1 / 4^{\prime \prime}$ |


| High Strength Couplers |  |
| :---: | :---: |
| Model Number | Rod $\varnothing$ Both Ends |
| CNHS-5 | 5/8" |
| CNHS-6 | 3/4" |
| CNHS-7 | 7/8" |
| CNHS-8 | $1{ }^{\prime \prime}$ |
| CNHS-9 | 1-1/8" |
| CNHS-10 | 1-1/4" |
| CNHS-11 | 1-3/8" |
| CNHS-12 | 1-1/2" |
| CNHS-14 | 1-3/4" |
| CNHS-16 | 2" |

Nuts and coupler nuts shall be grade compatible and conform to ASTM A563 and IFI-128. One or two sight holes are provided to assist installation. Standard strength couplers shall be used with ASTM A307 and equivalent rod; High strength couplers shall be used with ASTM C1045, ASTM A193-B7 and other high strength rod. High strength couplers may be used with standard strength rod. See ICC ES AC 391 section 1.4.5 for additional information.

Coupler elongation is minimal and is not considered in elongation calculations.



Standard Strength CN-X


High Strength CNHS-X

* Check with factory for availability of these sizes.


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## Coupler Nut Reducer

Use coupler nut reducers to change rod size. Normally rod is reduced in size. However sometimes the rod is increased from an embedment to a "run".

## Identification:

## Coupler Nut Reducer

Example: CNR610
CNR $=$ Coupling Nut Reducer, $610=3 / 4^{\prime \prime}-10$ NC to $1-1 / 4^{\prime \prime}-7$ NC Thread.

## Grade:

Standard Coupler Nuts are ASTM A563 Grade A. High strength Couplers are ASTM A563 Grade C.
Over $1-1 / 4^{\prime \prime}$ at the big end Grade 5 is supplied
Sight holes are standard.

## Installation

Thread coupler onto larger rod, bottom. Thread smaller rod into coupler and bottom on the larger thread. The thread bottoming in the coupler will indicate full engagement, a sight hole is not necessary.

## Coupler Nut Reducer



Standard Strength
CNR-XX


High Strength
CNRHS-XX

[^0]| 든들©0 | Model Number | Rod $\varnothing$ |  |
| :---: | :---: | :---: | :---: |
|  |  | Small | Large |
|  | CNR-45 | 1/2" | 1/2" |
|  | CNR-46 |  | 3/4" |
|  | CNR-47 |  | 7/8" |
|  | CN-48 |  | 1" |
|  | CNR-56 | 5/8" | 3/4" |
|  | CNR-57 |  | 7/8" |
|  | CNR-58 |  | 1" |
|  | CNR-59 |  | 1-1/8" |
|  | CNR-67 | 3/4" | 7/8" |
|  | CNR-68 |  | $1 "$ |
|  | CNR-69 |  | 1-1/8" |
|  | CNR-610 |  | 1-1/4" |
|  | CNR-78 | 7/8" | $1 "$ |
|  | CNR-79 |  | 1-1/8" |
|  | CNR-710 |  | 1-1/4" |
|  | CNR-89 | 1" | 1-1/8" |
|  | CNR-810 |  | 1-1/4" |
|  | CNR-910 | 1-1/8" | 1-1/4" |


|  | Model Number | Rod $\varnothing$ |  |
| :---: | :---: | :---: | :---: |
|  |  | Small | Large |
| $\begin{aligned} & \text { 등 } \\ & \underline{0} \\ & \text { 흔 } \\ & 0 \\ & \text { 읖 } \end{aligned}$ | CNRHS-56 | 5/8" | 3/4" |
|  | CNRHS-57 |  | 7/8" |
|  | CNRHS-58 |  | $1 "$ |
|  | CNRHS-59 |  | 1-1/8" |
|  | CNRHS-67 | 3/4" | 7/8" |
|  | CNRHS-68 |  | $1 "$ |
|  | CNRHS-69 |  | 1-1/8" |
|  | CNRHS-610 |  | 1-1/4" |
|  | CNRHS-78 | 7/8" | $1 "$ |
|  | CNRHS-79 |  | 1-1/8" |
|  | CNRHS-710 |  | 1-1/4" |
|  | CNRHS-89 | 1" | 1-1/8" |
|  | CNRHS-810 |  | 1-1/4" |
|  | CNRHS-812 * |  | 1-1/2" |
|  | CNRHS-814 * |  | 1-3/4" |
|  | CNRHS-910 | 1-1/8" | 1-1/4" |
|  | CNRHS-912 * |  | 1-1/2" |
|  | CNRHS-914 * |  | 1-3/4" |
|  | CNRHS-916 * |  | 2" |
|  | CNRHS-1011 * | 1-1/4" | 1-3/8" |
|  | CNRHS-1012 * |  | 1-1/2" |
|  | CNRHS-1014 * |  | 1-3/4" |
|  | CNRHS-1016 * |  | 2" |
|  | CNRHS-1112 * | 1-3/8" | 1-1/2" |
|  | CNRHS-1114 * |  | 1-3/4" |
|  | CNRHS-1116 * |  | 2" |
|  | CNRHS-1214 * | 1-1/2" | 1-3/4" |
|  | CNRHS-1216 * |  | 2" |
|  | CNRHS-1416 * | 1-3/4" | 2" |

## AutoTight Tie-Down Systems

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## Nuts

All nuts are Unified National Coarse thread pitch (UNC or NC)

Standard Nuts are SAE Grade 2 or ASTM 563-Grade A

High Strength Nuts are SAE grade 5, ASTM 563-Grade C or A194-2H.


## Nuts for HDG

Oversize nuts to fit HDG Hot Dipped Galvanized Rod available.

| Standard Nuts |  |
| :---: | :---: |
| Model Number | Diameter \& Thread |
| N-4 | 1/ 2"-13 NC |
| N-5 | 5/ 8"-11 NC |
| N-6 | 3/ 4"-10 NC |
| N-7 | 7/ 8"-9 NC |
| N-8 | 1"-8 NC |
| N-9 | 1-1/8"-7 NC |
| N-10 | 1-1/4"-7 NC |
| N-11 | 1-3/ 8"-6 NC |
| N-12 | 1-1/ 2"-6 NC |
| N-14 | 1-3/ 4"-5 NC |
| N-16 | 2"-4.5 NC |


| High Strength Nuts |  |
| :---: | :---: |
| Model Number | Diameter \& Thread |
| NHS-4 | 1/ 2"-13 NC |
| NHS-5 | 5/ 8"-11 NC |
| NHS-6 | 3/ 4"-10 NC |
| NHS-7 | 7/ 8"-9 NC |
| NHS-8 | 1"-8 NC |
| NHS-9 | 1-1/ 8"-7 NC |
| NHS-10 | 1-1/ 4"-7 NC |
| NHS-11 | 1-3/ 8"-6 NC |
| NHS-12 | 1-1/ 2"-6 NC |
| NHS-14 | 1-3/ 4"-5 NC |
| NHS-16 | 2"-4.5 NC |

Consult factory for sizes available.
Rethreading after HD Galvanizing is preferred.

## Washers

Washers supplied are SAE Washers. Common Washers may be substituted. W-11 thru W-16 are special $3-1 / 2$ " square washers.


| Washers |  |  |
| :---: | :---: | :---: |
| Model Number | Nominal Diameter | Outside <br> Diameter |
| W-4 | 1/2" | 1-1/ 16" |
| W-5 | 5/8" | 1-5/ 16" |
| W-6 | 3/4" | 1-1/2" |
| W-7 | 7/8" | 1-3/4" |
| W-8 | 1" | 2" |
| W-9 | 1-1/8" | 2-1/4" |
| W-10 | 1-1/4" | 2-1/2" |
| W-11 | 1-3/8" | 3-1/2" |
| W-12 | 1-1/2" | 3-1/2" |
| W-14 | 1-3/4" | 3-1/2" |
| W-16 | 2" | 3-1/2" |

[^1]
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