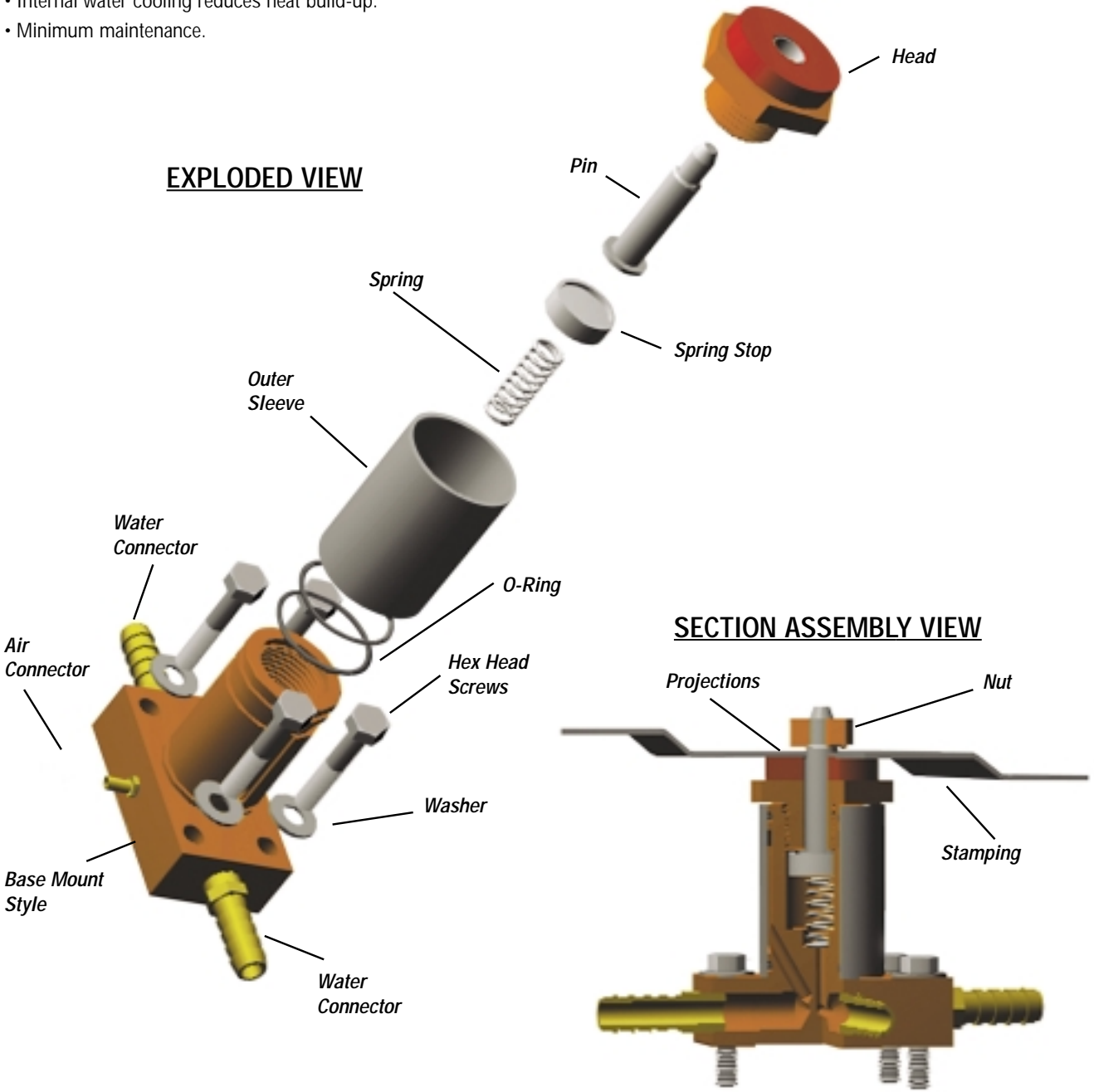


STUD & WELD NUT ELECTRODES

CenterLine manufactures a wide variety of stud & nut welding electrodes. The high quality design and assembly provides a number of features and benefits including:

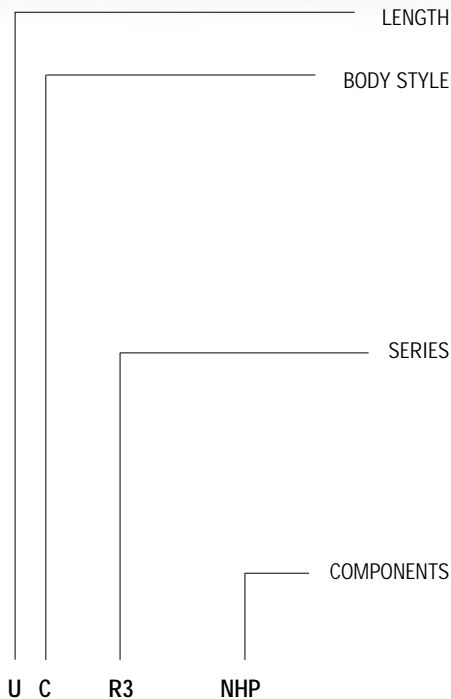
- Accurate on center positioning of pilotless nuts provided automatically.
- Insulated pin and sleeve prevents pin arcing in the threads.
- Unit converts from welding nuts to studs in seconds by removal of pilot pin and/or welding head.
- Used by automotive, mass transit, farm implement, stamping and appliance manufacturers.
- Internal water cooling reduces heat build-up.
- Minimum maintenance.



STUD & WELD NUT ELECTRODES

Stud & Weld Nut Model Number Breakdown

CODING EXAMPLE



USE **U** FOR STANDARD LENGTH (SHOWN BELOW)
 USE **X** FOR EXTENDED LENGTH (.50 (12.70) LONGER THAN STANDARD LENGTH)

USE **A** FOR BASE MOUNT
 USE **B** FOR 4 RW TAPER
 USE **C** FOR 5 RW TAPER
 USE **D** FOR 6 RW TAPER
 USE **E** FOR 7 RW TAPER
 USE **F** FOR 7/8-14 THREAD
 USE **G** FOR 1-12 THREAD
 USE **H** FOR BASE MOUNT WITH CABLE LUG (17/32" clearance hole for 1/2 screw)
 USE **J** FOR BASE MOUNT WITH CABLE LUG (Tapped hole for 1/2-13 screw)
 USE **K** FOR BASE MOUNT WITH CONTACT (CL-200-37)

USE **2** FOR SERIES 2 (.88" WELD FACE)
 USE **3** FOR SERIES 3 (1.25" WELD FACE)
 USE **4** FOR SERIES 4 (1.50" WELD FACE)
 USE **R2** FOR RETRACTABLE PIN SERIES 2 (.88" WELD FACE)
 USE **R3** FOR RETRACTABLE PIN SERIES 3 (1.25" WELD FACE)
 USE **R4** FOR RETRACTABLE PIN SERIES 4 (1.50" WELD FACE)
Note: Leave blank if generating a complete nut or stud welding unit because information is contained in the pin or head number.

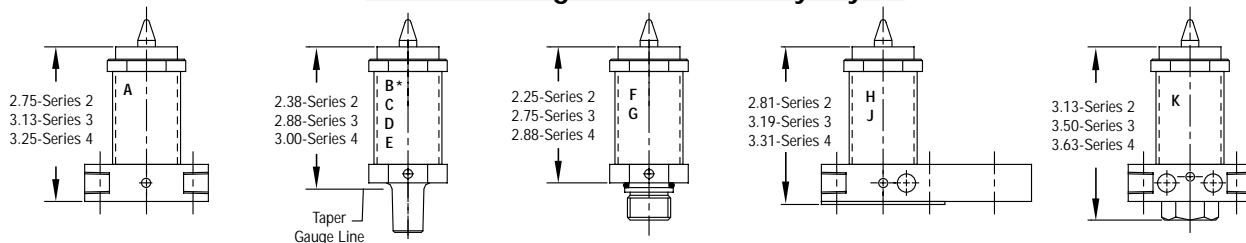
USE **NHP** FOR UNIT WITH NO HEAD OR PIN
 USE GENERATED PIN # FOR COMPLETE NUT WELDING UNIT
 USE GENERATED HEAD # FOR COMPLETE STUD WELDING UNIT

X A GH3050T125417
U G GP2A3482700525

Standard Length with 5 RW Body Style Retractable Series 3 with no Head or Pin.





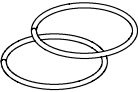
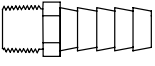


Extended Length, Base Mount Style, head #. This describes a complete stud welding unit.
 Standard Length, 1-12 Threaded Body Style, pin #. This describes a complete nut welding unit.

Standard Length of Series Body Styles



*Note: On Body Style 'B' add .25 to length shown.

Spare Parts List (Not including Pin or Head)

| | | | | | | | | | | | | | | | | | | | | | | | |
|--|---|---|--|---------------|----|---------------|----|---------------|----|---------------|----|---------------|--|----|-----------------|---------|-----------------|----|-----------------|---------|-----------------|---|---|
|  Spring Stop |  Spring |  Screw Insulator 230-012 |  Screw Insulator Washer W-203NP | | | | | | | | | | | | | | | | | | | | |
| <table border="1" style="margin: auto;"><tr><td>U2</td><td>SPRINGSTOP-U2</td></tr><tr><td>X2</td><td>SPRINGSTOP-X2</td></tr><tr><td>U3</td><td>SPRINGSTOP-U3</td></tr><tr><td>X3</td><td>SPRINGSTOP-X3</td></tr><tr><td>U4</td><td>SPRINGSTOP-U4</td></tr><tr><td>X4</td><td>SPRINGSTOP-X4</td></tr></table> | U2 | SPRINGSTOP-U2 | X2 | SPRINGSTOP-X2 | U3 | SPRINGSTOP-U3 | X3 | SPRINGSTOP-X3 | U4 | SPRINGSTOP-U4 | X4 | SPRINGSTOP-X4 | <table border="1" style="margin: auto;"><tr><td>U2</td><td>SPRING037013050</td></tr><tr><td>U3 & U4</td><td>SPRING037025075</td></tr><tr><td>X2</td><td>SPRING037032100</td></tr><tr><td>X3 & X4</td><td>SPRING037034125</td></tr></table> | U2 | SPRING037013050 | U3 & U4 | SPRING037025075 | X2 | SPRING037032100 | X3 & X4 | SPRING037034125 |  O-Ring Set CL-206, CL-306, CL-406 |  Water Connector RW-1015 |
| U2 | SPRINGSTOP-U2 | | | | | | | | | | | | | | | | | | | | | | |
| X2 | SPRINGSTOP-X2 | | | | | | | | | | | | | | | | | | | | | | |
| U3 | SPRINGSTOP-U3 | | | | | | | | | | | | | | | | | | | | | | |
| X3 | SPRINGSTOP-X3 | | | | | | | | | | | | | | | | | | | | | | |
| U4 | SPRINGSTOP-U4 | | | | | | | | | | | | | | | | | | | | | | |
| X4 | SPRINGSTOP-X4 | | | | | | | | | | | | | | | | | | | | | | |
| U2 | SPRING037013050 | | | | | | | | | | | | | | | | | | | | | | |
| U3 & U4 | SPRING037025075 | | | | | | | | | | | | | | | | | | | | | | |
| X2 | SPRING037032100 | | | | | | | | | | | | | | | | | | | | | | |
| X3 & X4 | SPRING037034125 | | | | | | | | | | | | | | | | | | | | | | |
| | |  Water Tube CLT-308-32 |  Air Connector BF1 | | | | | | | | | | | | | | | | | | | | |

STUD & WELD NUT ELECTRODES

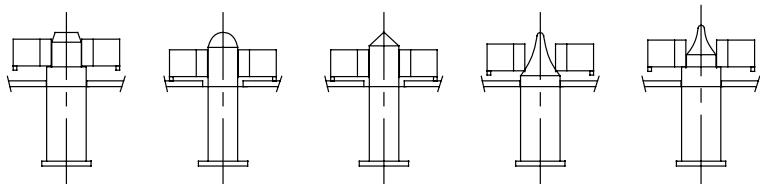
Manual Load Weld Nut Pins

| PinType | Description |
|---------|---|
| GP | Stainless Steel Pin, Supported by spring and/or air |
| CP | Coated, D2 Steel Pin, Supported by spring and/or air |
| RP | Retractable, Stainless Steel Pin, Movement controlled by Air Pressure only, Special Application please contact CenterLine |
| KP | Coated Retractable, D2 Steel Pin, Movement controlled by Air Pressure only, Special Application please contact CenterLine |

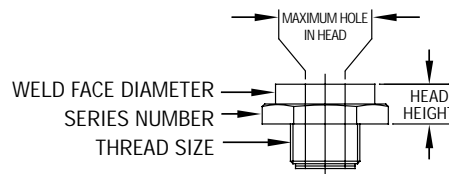
| Series | Thread Size | Weld Face Diameter | Maximum Hole in Head* | Head Height |
|--------|-------------|--------------------|-----------------------|-------------|
| 2 | 5/8-18 | 7/8 Standard | 0.427 (10.85) ID | 0.500 |
| 3 | 7/8-14 | 1-1/4 Standard | 0.642 (16.31) ID | 0.500 |
| 4 | 1-1/8-12 | 1-1/2 Standard | 0.852 (21.64) ID | 0.625 |

*Special weld nut electrodes are available for larger IDs and areas with clearance restrictions.

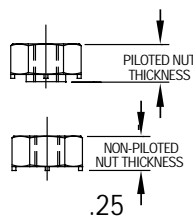
| Nose Type | Description |
|-----------|---|
| A | Preferred when locating nut and stamping, no stamping contact during weld, no hole in upper electrode |
| B | Preferred when locating nut only, no stamping contact, no hole in upper electrode |
| C | Preferred when locating nut only, no stamping contact, no hole in upper electrode |
| D | Locates nut at a point on the pin nose. upper electrode requires clearance hole for pin tip |
| E | Preferred when locating nut and stamping, no hole in upper, good for hard to load applications |



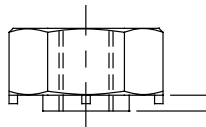
NOSE TYPE A NOSE TYPE B NOSE TYPE C NOSE TYPE D NOSE TYPE E



APPLICATION SIZES



CAUTION



DO NOT select B & C nose types when pilot thickness exceeds stamping thickness.

Generate Your Own Number (Total 14 Characters)

| | | | | | | | |
|---|----------|---------------|-----------|---|--|-----------------------------|------------------------|
| Example | GP | 2 | A | 348 | 270 | 05 | 25 |
| Breakdown | Pin Type | Series Number | Nose Type | Hole in Stamping -.005" (3 Dec.) - see note below | Hole in Nut -.005" (3 Dec.) - see note below | Stamping Thickness (2 Dec.) | Nut Thickness (2 Dec.) |
| NOTE: For B & C style pins, the "Hole in Stamping" value is the "Hole in Nut" value (i.e. GP2B2702700525) | | | | | | | |
| Part Number | | | | | | | |

STUD & WELD NUT ELECTRODES

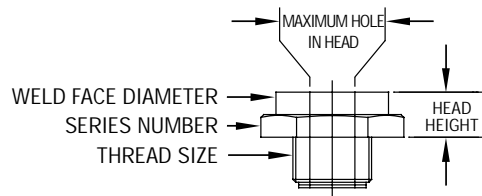
Auto Load Weld Nut Pins

| PinType | Description |
|---------|---|
| GA | Stainless Steel Pin, Supported by spring and/or air |
| CA | Coated, D2 Steel Pin, Supported by spring and/or air |
| RA | Retractable, Stainless Steel Pin, Movement controlled by Air Pressure only, Special Application please contact CenterLine |
| KA | Coated Retractable, D2 Steel Pin, Movement controlled by Air Pressure only, Special Application please contact CenterLine |

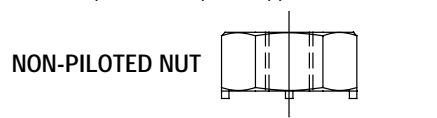
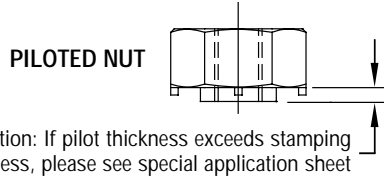
| Series | Thread Size | Weld Face Diameter | Maximum Hole in Head* | Head Height |
|--------|-------------|--------------------|-----------------------|-------------|
| 2 | 5/8-18 | 7/8 Standard | 0.427 (10.85) ID | 0.500 |
| 3 | 7/8-14 | 1-1/4 Standard | 0.642 (16.31) ID | 0.500 |
| 4 | 1-1/8-12 | 1-1/2 Standard | 0.852 (21.64) ID | 0.625 |

*Special weld nut electrodes are available for larger IDs and areas with clearance restrictions.

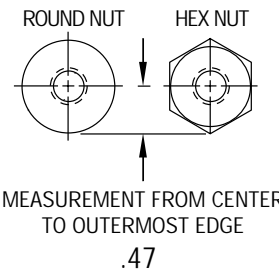
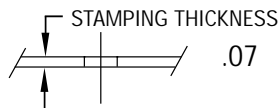
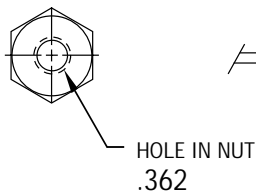
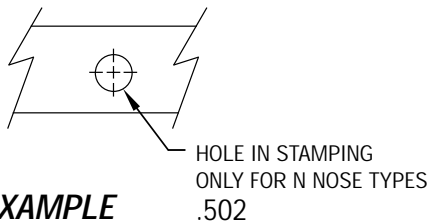
| Nose Type | |
|--|---|
| N | P |
| NOSE TYPE N | NOSE TYPE P |
| STRAIGHT | STRAIGHT |
| For auto loading nuts where the stamping is being located. | For auto loading nuts where the stamping is not being located. Refer to caution note. |



CAUTION
P Nose Types Only



APPLICATION SIZES



EXAMPLE

Generate Your Own Number (Total 14 Characters)

| Example | GA | 3 | N | 497 | 357 | 07 | 47 |
|--|----------|---------------|-----------|---|--|-----------------------------|--|
| Breakdown | Pin Type | Series Number | Nose Type | Hole in Stamping -.005" (3 Dec.) - see note below | Hole in Nut -.005" (3 Dec.) - see note below | Stamping Thickness (2 Dec.) | Measurement from Center to Outermost Edge (2 Dec.) |
| NOTE: For P style pins, the "Hole in Stamping" value is the "Hole in Nut" value (i.e. GA3PB3573570747) | | | | | | | |
| Part Number | | | | | | | |

STUD & WELD NUT ELECTRODES

Special Application Auto Load Weld Nut Pins

| PinType | Description |
|---------|---|
| GA | Stainless Steel Pin, Supported by spring and/or air |
| CA | Coated, D2 Steel Pin, Supported by spring and/or air |
| RA | Retractable, Stainless Steel Pin, Movement controlled by Air Pressure only, Special Application please contact CenterLine |
| KA | Coated Retractable, D2 Steel Pin, Movement controlled by Air Pressure only, Special Application please contact CenterLine |

| Series | Thread Size | Weld Face Diameter | Maximum Hole in Head* | Head Height |
|--------|-------------|--------------------|-----------------------|-------------|
| 2 | 5/8-18 | 7/8 Standard | 0.427 (10.85) ID | 0.500 |
| 3 | 7/8-14 | 1-1/4 Standard | 0.642 (16.31) ID | 0.500 |
| 4 | 1-1/8-12 | 1-1/2 Standard | 0.852 (21.64) ID | 0.625 |

*Special weld nut electrodes are available for larger IDs and areas with clearance restrictions.

Nose Type

| |
|--------------------|
| <p>NOSE TYPE M</p> |
| <p>STRAIGHT</p> |

For auto loading nuts where the stamping is not being located and pilot thickness is greater than material thickness.

PILOTED NUT

Use M nose type if pilot thickness exceeds stamping thickness, and pin is not used to locate stamping.

CAUTION

For M Nose Type pins ADD .005" to the pilot diameter.

APPLICATION SIZES

EXAMPLE

PILOT DIAMETER .502

HOLE IN NUT .362

STAMPING THICKNESS .07

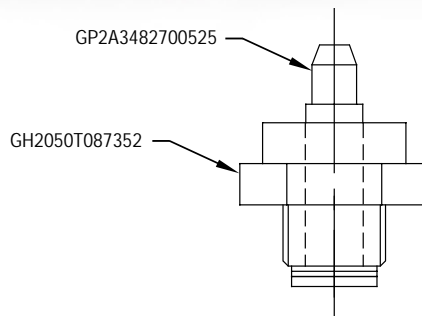
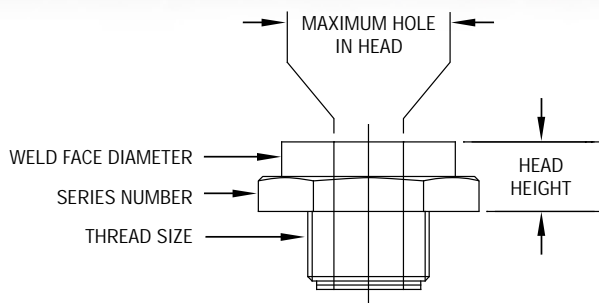
MEASUREMENT FROM CENTER TO OUTERMOST EDGE .47

Generate Your Own Number (Total 14 Characters)

| Example | GA | 3 | M | 507 | 357 | 07 | 47 |
|-------------|----------|---------------|-----------|---------------------------------|-----------------------------|-----------------------------|--|
| Breakdown | Pin Type | Series Number | Nose Type | Pilot Diameter + .005" (3 Dec.) | Hole in Nut -.005" (3 Dec.) | Stamping Thickness (2 Dec.) | Measurement from Center to Outermost Edge (2 Dec.) |
| Part Number | | | | | | | |

STUD & WELD NUT ELECTRODES

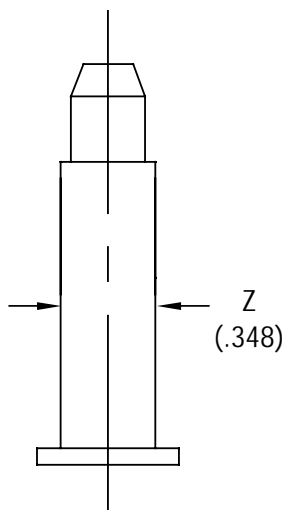
Nut Welding Heads



| Series | Thread Size | Weld Face Diameter | Maximum Hole in Head* | Head Height |
|--------|-------------|--------------------|-----------------------|-------------|
| 2 | 5/8-18 | 7/8 Standard | 0.427 (10.85) ID | 0.500 |
| 3 | 7/8-14 | 1-1/4 Standard | 0.642 (16.31) ID | 0.500 |
| 4 | 1-1/8-12 | 1-1/2 Standard | 0.852 (21.64) ID | 0.625 |

*Special weld nut electrodes are available for larger IDs and areas with clearance restrictions.

EXAMPLE



Pin # GP2A3482700525

Series Number Major Diameter of Pin (Z dimension)

PART NUMBER INSTRUCTIONS

- Example:** Z Dimension = .348
- Step 1** Establish the major diameter of pin (Z dimension).
- Step 2** The final 3 digits in the nut welding head # are represented by the following formula.
 $Z (.348) + .002 = .350$
- Step 3** Lastly, insert the result from **Step 2** to the end of the series part number prefix below.

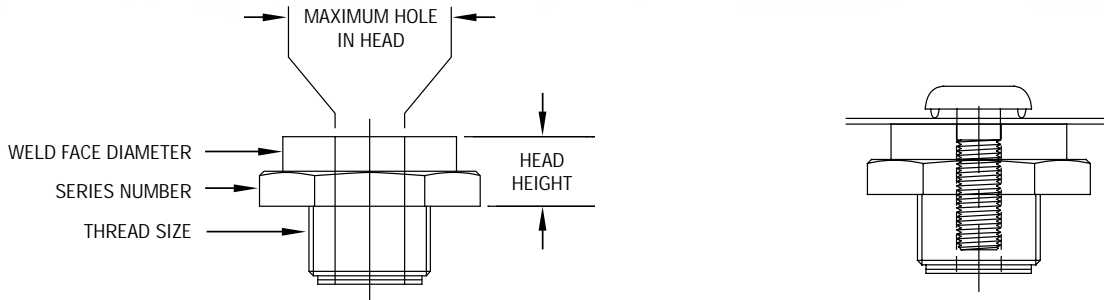
Final Nut Welding Head Number
Example Series 2 - GH2050T087350

Generate Your Own Number (Total 13 Characters)

| Series | Part Number Prefix | Z + .002" Specify to 3 decimal places. |
|--------|--------------------|--|
| 2 | GH2050T087 | |
| 3 | GH3050T125 | |
| 4 | GH4062T150 | |

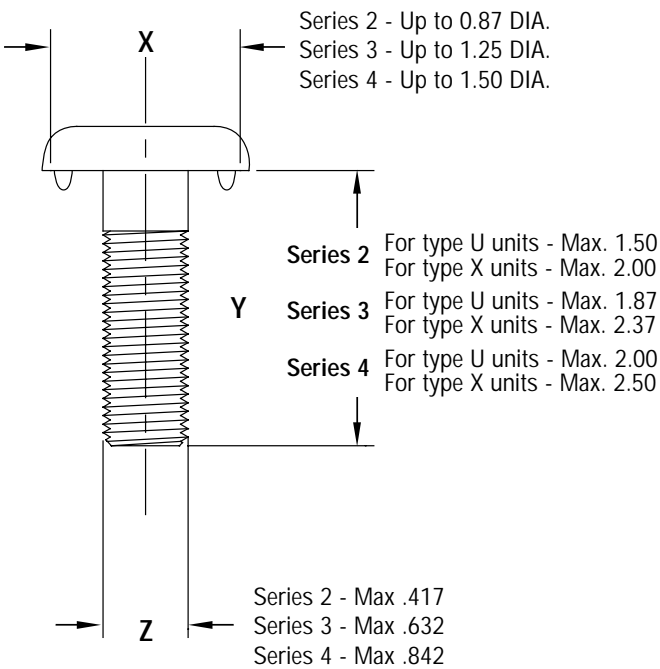
STUD & WELD NUT ELECTRODES

Stud Welding Heads



| Series | Thread Size | Weld Face Diameter | Maximum Hole in Head* | Head Height |
|--------|-------------|--------------------|-----------------------|-------------|
| 2 | 5/8-18 | 7/8 Standard | 0.427 (10.85) ID | 0.500 |
| 3 | 7/8-14 | 1-1/4 Standard | 0.642 (16.31) ID | 0.500 |
| 4 | 1-1/8-12 | 1-1/2 Standard | 0.852 (21.64) ID | 0.625 |

*Special weld nut electrodes are available for larger studs and areas with clearance restrictions.



PART NUMBER INSTRUCTIONS

Example: X Dimension - .75
 Y Dimension - 1.25
 Z Dimension - .430

- Step 1** In this case, X & Y indicates Series 2 however, Z dimension dictates Series 3 or larger.
- Step 2** The final 3 digits in the stud welding head # is represented by the following formula.
 $Z (.430) + .010 = .440$
- Step 3** Lastly, insert the result from Step 2 to the end of the series part number.

Final Stud Welding Head Number
 Example Series 3 - GH3050T125440

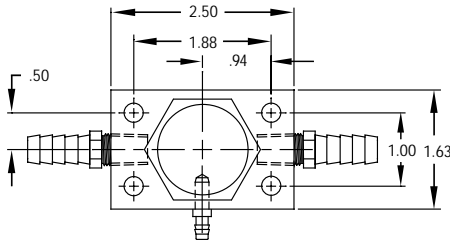
Generate Your Own Number (Total 13 Characters)

| Series | Part Number Prefix | Z + .010" Specify to 3 decimal places. |
|--------|--------------------|--|
| 2 | GH2050T087 | |
| 3 | GH3050T125 | |
| 4 | GH4062T150 | |

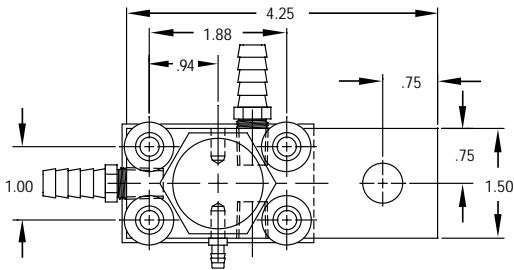
STUD & WELD NUT ELECTRODES

Mounting Dimensions For Base Mount Body Styles

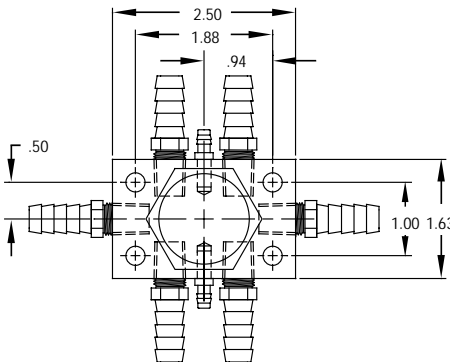
Body Style A



Body Style H&J



Body Style K

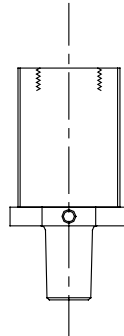


NOTE: Base units come with 1/4-20 screws for mounting.

PART NUMBER EXAMPLE

COMPLETE BODY REPLACEMENT UNIT

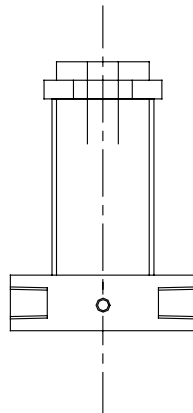
UCR3NHP



- NHP - No Head or Pin
- R3 - Retractable Pin series 3
- C - 5 RW Taper
- U - Standard Length

COMPLETE STUD WELDING UNIT

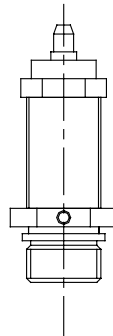
XAGH3050T125440



- GH3050T125440
Head # created from Stud welding head sheet.
- A - Base Mount
- X - Extended Length

COMPLETE NUT WELDING UNIT

UGGP2A3482700525



- GP2A3482700525
Pin # created from manual load weld nut pins sheet.
- G - 1" - 12 Thread
- U - Standard Length