

# ASHWANI IMPORTS & EXPORTS

The Quality you deserve



## BUSINESS CATALOGUE

### 2024-2025



## أشواني للاستيراد والتصدير

الجودة التي تستحقها





# ASHWANI IMPORTS & EXPORTS

## أشواني للاستيراد والتصدير

### INTRODUCTION

*Ashwani Imports & Exports, we are your one-stop destination for a wide array of industrial solutions. Our extensive product range covers **Anchor Bolts, Fasteners, Nuts, Washers, Screws, U Bolts, Threaded Rods, Hanging Clamps, Beam Clamps, Consumables, Oil & Lubricants, Hand Tools, Pipes, Structural Steel, Plates, Machinery, Tools & Dies, and Castings in both Aluminum and Iron.***

*We are a domestic steel construction fastener manufacturer with products in multiple industries including Steel Fabrication, Highway, Marine, Timber Construction, Power and Energy, Government and Military, Precast Concrete, Light Rail, Mining, Light Pole & Traffic Signal, Pole Line Hardware, and OEM. We specialize in fasteners not easily found in the marketplace.*

*No matter the size or grade you require, we have a solution that fits. Our dedication to meeting diverse needs means that we cater to a wide range of specifications, providing versatility and reliability in every order.*

*Our specialization lies in customized fabrication, where we transform your unique requirements into tangible solutions. This bespoke approach sets us apart, allowing us to deliver tailored products that perfectly align with your needs.*

*Quality is the cornerstone of our operations. With an ISO 9001:2015 and 45001:2018 certification, we ensure that every product leaving our facility adheres to stringent quality control processes. Our goal is to not only meet industry standards but to exceed them consistently.*

*With a wide spectrum of offerings and a focus on personalized solutions, we are your trusted partner for all your industrial and commercial requirements.*

*Experience the difference that comes with a commitment to excellence. We appreciate if you choose **Ashwani Imports & Exports** - where quality meets customization. **Ashwani Imports & Exports** means choosing a partner dedicated to delivering quality, customization, and excellence in every aspect.*

*Experience the difference for yourself. Discover **Ashwani Imports & Exports** – where your needs meet our expertise.*

**CEO, ASHWANI KUMAR**





## Annexure B



|                    |                             |
|--------------------|-----------------------------|
| GSTIN              | 03AIXPK5276B2Z4             |
| Legal Name         | ASHWANI KUMAR               |
| Trade Name, if any | ASHWANI IMPORTS AND EXPORTS |

### Details of Proprietor

1



|                    |               |
|--------------------|---------------|
| Name               | ASHWANI KUMAR |
| Designation/Status | PROPRIETOR    |
| Resident of State  | Punjab        |



## Annexure A



|                    |                             |
|--------------------|-----------------------------|
| GSTIN              | 03AIXPK5276B2Z4             |
| Legal Name         | ASHWANI KUMAR               |
| Trade Name, if any | ASHWANI IMPORTS AND EXPORTS |

### Details of Additional Places of Business

|                                                            |   |
|------------------------------------------------------------|---|
| Total Number of Additional Places of Business in the State | 0 |
|------------------------------------------------------------|---|





Government of India

Form GST REG-06

[See Rule 10(1)]

### Registration Certificate

Registration Number : 03AIXPK5276B2Z4

|                                                                                                                                               |                                        |                                                                                         |            |                                                                                       |                |
|-----------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------|-----------------------------------------------------------------------------------------|------------|---------------------------------------------------------------------------------------|----------------|
| 1.                                                                                                                                            | Legal Name                             | ASHWANI KUMAR                                                                           |            |                                                                                       |                |
| 2.                                                                                                                                            | Trade Name, if any                     | ASHWANI IMPORTS AND EXPORTS                                                             |            |                                                                                       |                |
| 3.                                                                                                                                            | Constitution of Business               | Proprietorship                                                                          |            |                                                                                       |                |
| 4.                                                                                                                                            | Address of Principal Place of Business | 302/4D, MODEL TOWN, EXTENSION D BLOCK, ADARSH NAGAR, LUDHIANA, Ludhiana, Punjab, 141002 |            |                                                                                       |                |
| 5.                                                                                                                                            | Date of Liability                      |                                                                                         |            |                                                                                       |                |
| 6.                                                                                                                                            | Period of Validity                     | From                                                                                    | 14/10/2021 | To                                                                                    | Not Applicable |
| 7.                                                                                                                                            | Type of Registration                   | Regular                                                                                 |            |  |                |
| 8.                                                                                                                                            | Particulars of Approving Authority     | Punjab                                                                                  |            |                                                                                       |                |
| <p>Signature</p> <p>Signature Not Verified<br/>Digitally signed by DS GOODS AND SERVICES TAX NETWORK(4)<br/>Date: 2021.10.14 16:30:21 IST</p> |                                        |                                                                                         |            |                                                                                       |                |
| Name                                                                                                                                          |                                        | Manu Garg                                                                               |            |                                                                                       |                |
| Designation                                                                                                                                   |                                        | Excise And Taxation Officer-cum- State Tax Officer                                      |            |                                                                                       |                |
| Jurisdictional Office                                                                                                                         |                                        | Ludhiana 2 - Ward No.30                                                                 |            |                                                                                       |                |
| 9. Date of issue of Certificate                                                                                                               |                                        | 14/10/2021                                                                              |            |                                                                                       |                |
| Note: The registration certificate is required to be prominently displayed at all places of business in the State.                            |                                        |                                                                                         |            |                                                                                       |                |

This is a system generated digitally signed Registration Certificate issued based on the approval of application granted on 14/10/2021 by the jurisdictional authority.



# Certificate of Registration

## ASHWANI IMPORTS AND EXPORTS

302/4D, MODEL TOWN EXTN, D BLOCK, ADARSH NAGAR,  
LUDHIANA-141002, PUNJAB, INDIA

has been assessed and Certified by Otabu Certification Pvt. Ltd.  
as meeting the requirements of:

### ISO 9001:2015

## Quality Management System

For the following scope of activities:

IMPORT, EXPORTS & TRADING OF ANCHOR BOLTS, FASTENERS, SCAFFOLDING ACCESSORIES,  
BUILDING MATERIAL, NYLONE ROPES, SHOES, TOOLS & DIES, CONSUMABLES, TRACTOR AND  
TRAILOR PARTS, HOSIERY ITEMS, DENIM, TRACK SUITS, T-SHIRTS & FOOD PRODUCTS

Issue No : 01  
Date of Certification: 30 August 2023  
1st Surveillance Due: 29 August 2024

Revision No ( ) : NA  
2nd Surveillance Due: 29 August 2025  
Certificate Expiry: 29 August 2026  
(subject to the company maintaining its system to the  
required standard)

Certificate No:- 0830Q201823

To Verify this Certificate please visit at [www.otabucert.com](http://www.otabucert.com)



  
Dr. Anita Gupta  
(Managing Director)

\*Validity of the certificate is subject to successful completion of surveillance audit on or before due date (in case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawal). \*This Certificate of Registration remains the Property of Otabu Certification Pvt. Ltd. and shall be returned immediately upon request.

Otabu Certification Pvt. Ltd., RZ-9 (Ground Floor), Prem Nagar, Uttam Nagar, New Delhi-110059 (India)

Email:- [info@otabucert.com](mailto:info@otabucert.com) website:- [www.otabucert.com](http://www.otabucert.com)





# Certificate of Registration

## ASHWANI IMPORTS AND EXPORTS

302/4D, MODEL TOWN EXTN, D BLOCK, ADARSH NAGAR,  
LUDHIANA-141002, PUNJAB, INDIA

has been assessed and Certified by Otabu Certification Pvt. Ltd.  
as meeting the requirements of:

### ISO 45001:2018

### Occupational Health & Safety Management System

For the following scope of activities:

IMPORT, EXPORTS & TRADING OF ANCHOR BOLTS, FASTENERS, SCAFFOLDING ACCESSORIES,  
BUILDING MATERIAL, NYLONE ROPES, SHOES, TOOLS & DIES, CONSUMABLES, TRACTOR AND  
TRAILOR PARTS, HOSIERY ITEMS, DENIM, TRACK SUITS, T-SHIRTS & FOOD PRODUCTS

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Certificate No:- 0830O201923

To Verify this Certificate please visit at [www.otabucert.com](http://www.otabucert.com)



Dr. Anita Gupta  
(Managing Director)

\*Validity of the certificate is subject to successful completion of surveillance audit on or before due date (in case surveillance audit is not allowed to be conducted, this certificate shall be suspended/withdrawal). \*This Certificate of Registration remains the Property of Otabu Certification Pvt. Ltd. and shall be returned immediately upon request.

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सत्यमेव जयते



**Government of India**  
**Ministry of Commerce and Industry**  
**Directorate General of Foreign Trade**

**Office of the Additional Director General of Foreign Trade, Ludhiana**  
**Niryat Bhavan, BSNL Telephone Exchange, E Block, BRS Nagar, Ludhiana**

**Importer-Exporter Code**

This is to certify that **Ashwani Imports & Exports** is issued an Importer-Exporter Code (IEC) **3017504280** with details as follows -

|                                     |                                                                                                                    |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------|
| IEC                                 | 3017504280                                                                                                         |
| स्थाई खाता सं.(पैन) /PAN            | AIXPK5276B                                                                                                         |
| फर्म का नाम/Firm Name               | Ashwani Imports & Exports                                                                                          |
| निगम की प्रकृति /Nature of Concern  | Proprietorship                                                                                                     |
| जारी करने की तारीख/Date of Issue    | 01/06/2017                                                                                                         |
| पता/Registered Address              | 302/4D, Adarash Nagar,, Model Town Extension, D Block Contact No: 918146274050, Ludhiana, LUDHIANA, PUNJAB, 141002 |
| धारक का नाम / Name of the Signatory | Ashwani Kumar                                                                                                      |
| Director / Partner Details          | Refer online at <a href="https://dgft.gov.in">https://dgft.gov.in</a> or scan the QR Code                          |
| शाखा/इकाई /Branch Details           | Refer online at <a href="https://dgft.gov.in">https://dgft.gov.in</a> or scan the QR Code                          |

**Last Modified : 23/08/2022**

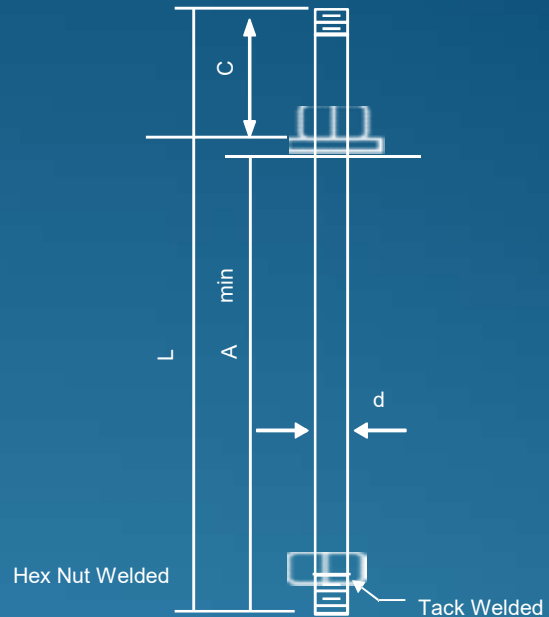
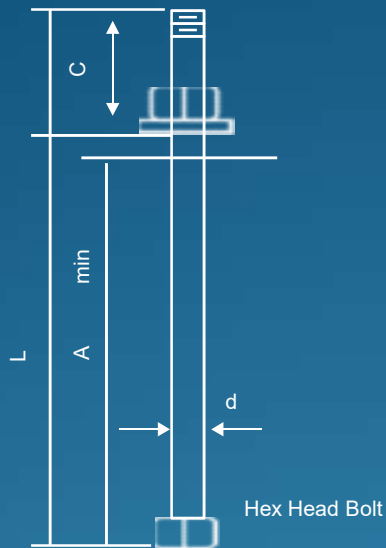
**File Number : LDAIECPAMEND00009523AM23**



**Note :** This is a system-generated certificate. Authenticity / Updated details of the IEC can be checked at official DGFT website <https://dgft.gov.in> by entering the IEC and Firm Name under Services > View Any IEC Details. You can also authenticate the certificate by scanning the QR code.



## ANCHOR BOLT STRAIGHT TYPE



| Anchor Bolts  |           | Dimension in MM |               |              | Minimum Edge Distance |       | Capacity |            |
|---------------|-----------|-----------------|---------------|--------------|-----------------------|-------|----------|------------|
| Dia in Inches | Dia in MM | A               | C             | L            | MM To Center Bolts    |       | Shear KN | Tension KN |
|               |           | Minimum Depth   | Thread Length | Total Length | Tension               | Shear |          |            |
| 1/2"          | 12        | 250             | 40            | 355          | 80                    | 100   | 4.5      | 6.8        |
| 5/8"          | 16        | 250             | 40            | 355          | 85                    | 125   | 6.8      | 7.7        |
| 3/4"          | 20        | 300             | 50            | 405          | 85                    | 150   | 9.9      | 10.4       |
| 7/8"          | 22        | 360             | 50            | 460          | 85                    | 175   | 14.0     | 13.1       |
| 1"            | 24        | 410             | 65            | 510          | 90                    | 175   | 18.5     | 15.8       |
| 1-1/8"        | 27        | 460             | 75            | 560          | 90                    | 200   | 23.4     | 15.8       |
| 1-1/4"        | 32        | 510             | 75            | 610          | 100                   | 225   | 29.7     | 18.0       |
| 1-3/8"        | 36        | 560             | 90            | 680          | 100                   | 250   | 35.1     |            |
| 1-1/2"        | 39        | 610             | 90            | 730          | 100                   | 275   | 43.2     |            |
| 1-5/8"        | 42        | 660             | 100           | 800          | 125                   | 300   | 50.9     |            |
| 1-3/4"        | 45        | 710             | 115           | 865          | 125                   | 325   | 58.5     |            |
| 2"            | 50        | 810             | 125           | 990          | 150                   | 350   | 77.4     |            |
| 2-1/4"        | 57        | 910             | 140           | 1100         | 150                   | 400   | 101.7    |            |
| 2-1/2"        | 64        | 1020            | 160           | 1240         | 175                   | 450   | 125.6    |            |

Coating : Mill Finish, Electro Galvanized & Hot Dip Galvanized

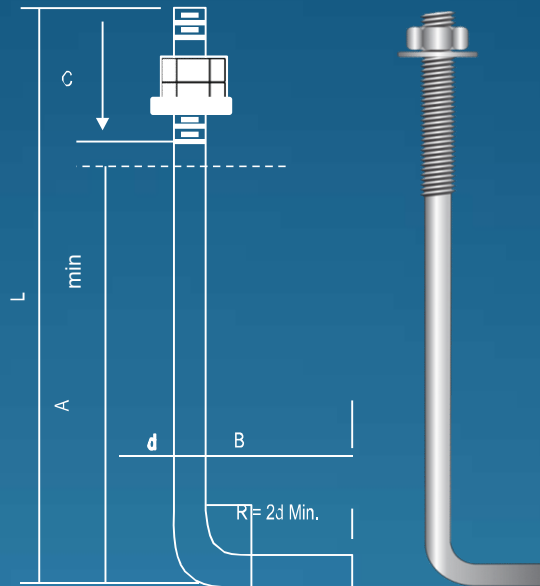
Grade : 4.6, ASTM A307-A, A307-B, A36, A193-B7,

AISI SS304, SS316, SS316S31, Grade : 8.8, 10.9





## ANCHOR BOLT – L TYPE



| Anchor Bolts  |           | Dimension in MM    |           |                    |                   | Minimum Edge Distance |     | Capacity |            |
|---------------|-----------|--------------------|-----------|--------------------|-------------------|-----------------------|-----|----------|------------|
| Dia in Inches | Dia in MM | A<br>Minimum Depth | B<br>Bend | C<br>Thread Length | L<br>Total Length | MM To Center Bolts    |     | Shear KN | Tension KN |
| 1/2"          | 12        | 250                | 100       | 40                 | 355               | 80                    | 10  | 4.5      | 8.1        |
| 5/8"          | 16        | 250                | 100       | 40                 | 355               | 85                    | 125 | 6.8      | 10.4       |
| 3/4"          | 20        | 300                | 150       | 50                 | 405               | 85                    | 150 | 9.9      | 14.0       |
| 7/8"          | 22        | 360                | 150       | 50                 | 460               | 85                    | 175 | 14.0     | 18.0       |
| 1"            | 24        | 410                | 200       | 65                 | 510               | 90                    | 175 | 18.5     | 22.5       |
| 1-1/8"        | 27        | 460                | 200       | 75                 | 560               | 90                    | 200 | 23.4     | 24.3       |
| 1-1/4"        | 32        | 510                | 200       | 75                 | 610               | 100                   | 225 | 29.7     | 28.8       |
| 1-3/8"        | 36        | 560                | 200       | 90                 | 660               | 100                   | 250 | 35.1     | 33.8       |
| 1-1/2"        | 39        | 610                | 200       | 90                 | 710               | 100                   | 275 | 43.2     | 38.7       |
| 1-5/8"        | 42        | 660                | 200       | 100                | 760               | 125                   | 300 | 50.9     | 44.1       |
| 1-3/4"        | 45        | 710                | 255       | 115                | 850               | 125                   | 325 | 58.5     | 46.8       |
| 2"            | 50        | 810                | 255       | 125                | 950               | 150                   | 350 | 77.4     | 58.5       |
| 2-1/4"        | 57        | 910                | 255       | 140                | 1070              | 150                   | 400 | 101.7    | 70.7       |
| 2-1/2"        | 64        | 1020               | 255       | 160                | 1200              | 175                   | 450 | 125.6    | 84.2       |

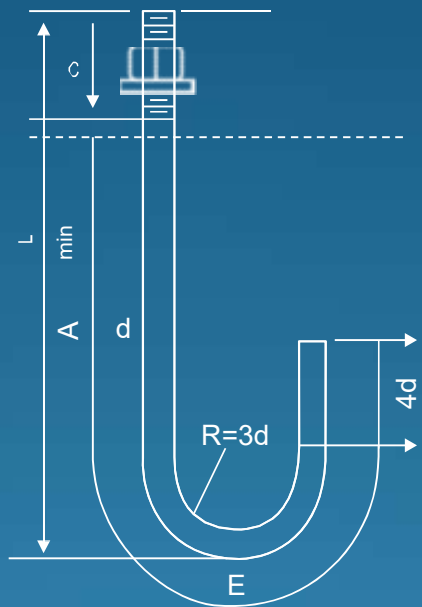
Coating : Mill Finish, Electro Galvanized & Hot Dip Galvanized

Grade : 4.6. ASTM A307-A, A307-B, A36, A193-B7,

AISI SS304, SS316, SS316S31, Grade : 8.8, 10.9



## ANCHOR BOLT – J TYPE



| Anchor Bolts  |           | Dimension in MM |               | Cut Length  |              | Minimum Edge Distance |                    |       | Capacity |            |
|---------------|-----------|-----------------|---------------|-------------|--------------|-----------------------|--------------------|-------|----------|------------|
| Dia in Inches | Dia in MM | A               | C             | E           | L            | Cut Length            | MM To Center Bolts |       |          | Tension KN |
|               |           | Minimum Depth   | Thread Length | Hook Length | Total Length |                       | Tension            | Shear | Shear KN |            |
| 1/2"          | 12        | 250             | 50            | 190         | 410          | 542                   | 80                 | 100   | 4.5      | 9.5        |
| 5/8"          | 16        | 250             | 60            | 240         | 420          | 595                   | 85                 | 125   | 6.8      | 14.9       |
| 3/4"          | 20        | 300             | 70            | 285         | 485          | 705                   | 85                 | 150   | 9.9      | 22.5       |
| 7/8"          | 22        | 360             | 75            | 335         | 545          | 787                   | 85                 | 175   | 14.0     | 31.1       |
| 1"            | 24        | 410             | 90            | 380         | 610          | 874                   | 90                 | 175   | 18.5     | 40.5       |
| 1-1/8"        | 27        | 460             | 100           | 430         | 675          | 970                   | 90                 | 200   | 23.4     | 51.3       |
| 1-1/4"        | 32        | 510             | 115           | 475         | 735          | 1065                  | 100                | 225   | 29.7     | 65.3       |
| 1-3/8"        | 36        | 560             | 125           | 525         | 800          | 1163                  | 100                | 250   | 35.1     | 78.3       |
| 1-1/2"        | 39        | 610             | 125           | 570         | 865          | 1281                  | 100                | 275   | 43.2     | 95.0       |
| 1-5/8"        | 42        | 660             | 145           | 620         | 925          | 1354                  | 125                | 300   | 50.9     | 108.5      |
| 1-3/4"        | 45        | 710             | 150           | 665         | 990          | 1452                  | 125                | 325   | 58.5     | 128.3      |
| 2"            | 50        | 810             | 180           | 760         | 1120         | 1648                  | 150                | 350   | 77.4     | 168.8      |
| 2-1/4"        | 57        | 910             | 200           | 855         | 1245         | 1861                  | 150                | 400   | 101.7    | 212.0      |
| 2-1/2"        | 64        | 1020            | 220           | 955         | 1370         | 2074                  | 175                | 450   | 125.6    | 258.8      |

Coating : Mill Finish, Electro Galvanized & Hot Dip Galvanized

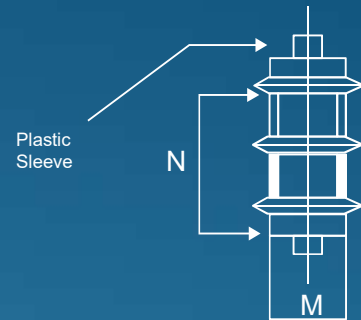
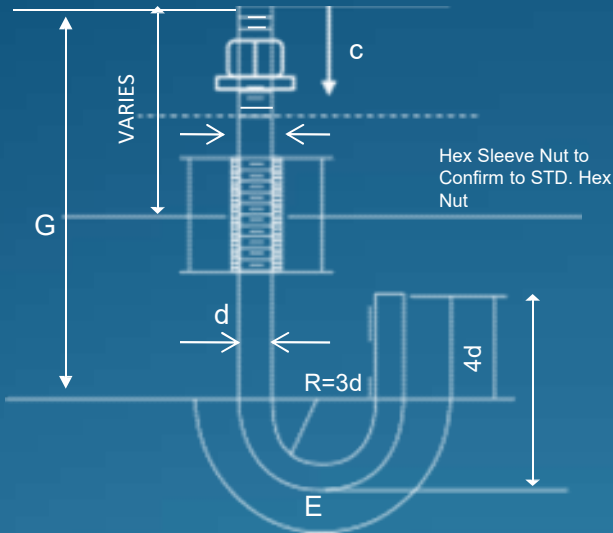
Grade : 4.6, ASTM A307-A, A307-B, A36, A193-B7,

AISI SS304, SS316, SS316S31, Grade : 8.8, 10.9





## ANCHOR BOLT – J TYPE WITH SLEEVE



### DETAIL OF SLEEVE

PLASTIC ANCHOR BOLT SLEEVES SHALL BE USED WHERE REQUIRED WITH SLEEVE SHALL BE CUT OFF TO MAINTAIN EMBEDMENT LENGTH 'N' WHEN NO SLEEVE IS USED EMBEDMENT LENGTH FOR THIS 1 & 2 IS A-N

| Anchor Bolts  |           | Dimension in MM |               | Length Sleeve |               |     |              | Minimum Edge Distance |                    |       | Capacity |       | Sleeves |     |
|---------------|-----------|-----------------|---------------|---------------|---------------|-----|--------------|-----------------------|--------------------|-------|----------|-------|---------|-----|
| Dia in Inches | Dia in MM | A               | C             | E             | F             | G   | L            | Cut Length            | MM To Center Bolts |       |          |       |         |     |
|               |           | Minimum Depth   | Thread Length | Hook Length   | Nut on Type 4 |     | Total Length |                       | Tension            | Shear |          |       |         |     |
| 3/4"          | 20        | 300             | 70            | 285           | 50            | 280 | 355          | 575                   | 85                 | 150   | 9.9      | 22.5  | 50      | 100 |
| 7/8"          | 22        | 360             | 75            | 335           | 55            | 325 | 415          | 657                   | 85                 | 175   | 14.0     | 31.3  | 50      | 100 |
| 1"            | 24        | 410             | 90            | 380           | 65            | 375 | 475          | 740                   | 90                 | 175   | 18.5     | 40.5  | 75      | 100 |
| 1-1/8"        | 27        | 460             | 100           | 430           | 75            | 420 | 535          | 832                   | 90                 | 200   | 23.4     | 51.3  | 75      | 150 |
| 1-1/4"        | 32        | 510             | 115           | 475           | 85            | 465 | 595          | 926                   | 100                | 225   | 29.7     | 65.3  | 75      | 150 |
| 1-3/8"        | 36        | 560             | 125           | 525           | 90            | 515 | 655          | 1018                  | 100                | 250   | 35.1     | 78.3  | 75      | 150 |
| 1-1/2"        | 39        | 610             | 125           | 570           | 95            | 560 | 715          | 1111                  | 100                | 275   | 43.2     | 95.0  | 100     | 150 |
| 1-5/8"        | 42        | 660             | 145           | 620           | 110           | 605 | 770          | 1199                  | 125                | 300   | 50.9     | 108.5 | 100     | 150 |
| 1-3/4"        | 45        | 710             | 150           | 665           | 120           | 650 | 830          | 1292                  | 125                | 325   | 58.5     | 128.3 | 100     | 200 |
| 2"            | 50        | 810             | 180           | 760           | 125           | 750 | 955          | 1484                  | 150                | 350   | 77.4     | 168.8 | 100     | 200 |
| 2-1/4"        | 57        | 910             | 200           | 855           | 145           | 840 | 1070         | 1686                  | 150                | 400   | 101.7    | 212.0 | 100     | 200 |
| 2-1/2"        | 64        | 1020            | 220           | 955           | 160           | 955 | 1190         | 1894                  | 175                | 450   | 125.8    | 258.8 | 150     | 200 |

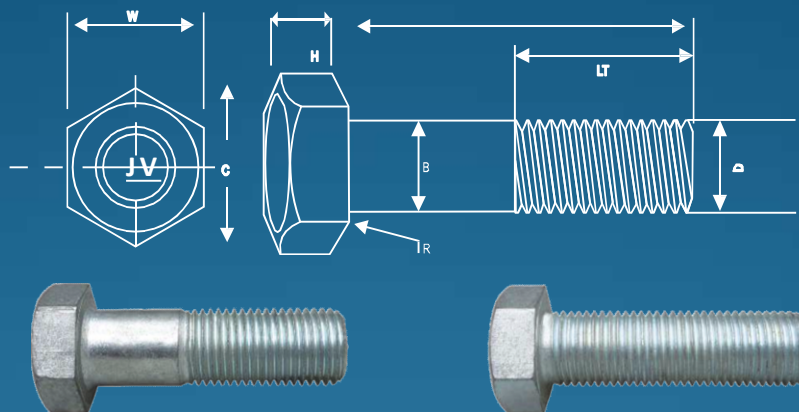
Coating : Mill Finish, Electro Galvanized & Hot Dip Galvanized

Grade : 4.6. ASTM A307-A, A307-B, A36, A193-B7,

AISI SS304, SS316, SS316S31, Grade : 8.8, 10.9



## HEXAGON HEAD BOLT / SCREW DIN 931/933 (MM THREAD)



### DIMENSIONS :

#### Note :

1. The bolts & Screw will generally confirm to ISO 4014, ISO 898-1 and DIN 931/933.
2. Threads will confirm to class 6g of ISO 965/2, Coarse Series.
3. Material High Grade Carbon / Alloy Steel.
4. Heat Treatment : Property Class 8.8 or 10.9\*
5. Thread Length LT. LT1 for L<125 LT2 for L>125 to 200 LT3 for L>200.
6. Screw Length equal to or shorter than listed in column 'LFT' will be fully threaded.
7. All dimensions are in millimeters.

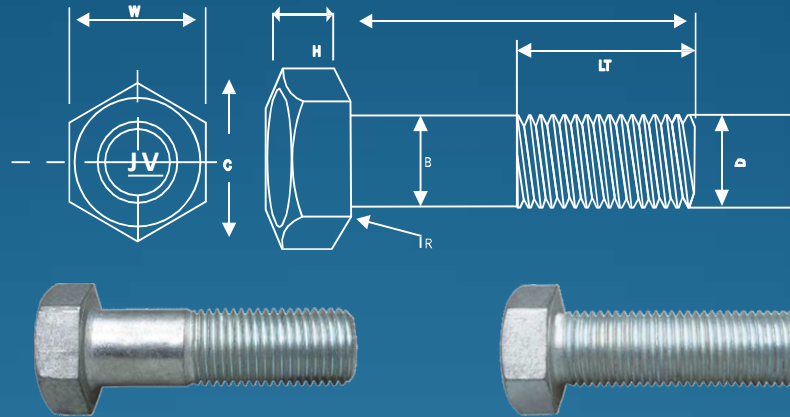
| Normal Thread Size | Pitch | W Max.    | C Min.      | B Max. | H Nom. | R Min. | Length of Thread |      |      |     | Length Range L |
|--------------------|-------|-----------|-------------|--------|--------|--------|------------------|------|------|-----|----------------|
|                    |       |           |             |        |        |        | LT 1             | LT 2 | LT 3 | LFT |                |
| M06                | 1.0   | 10.0      | 11.05       | 6.0    | 4.0    | 0.25   | 18               | -    | -    | FT  | 10-150         |
| M08                | 1.25  | 13.0      | 14.98       | 8.0    | 5.3    | 0.4    | 22               | 28   | -    | FT  | 12-150         |
| M10                | 1.5   | 17.0-16.0 | 18.90-17.80 | 10.0   | 6.4    | 0.4    | 26               | 32   | 45   | FT  | 16-250         |
| M12                | 1.75  | 19.0-18.0 | 21.10-20.03 | 12.0   | 7.5    | 0.6    | 30               | 36   | 49   | FT  | 20-250         |
| M14                | 2.0   | 22.0-21.0 | 24.49-23.25 | 14.0   | 8.8    | 0.6    | 34               | 40   | 53   | FT  | 25-200         |
| M16                | 2.0   | 24.0      | 26.75       | 16.0   | 10.0   | 0.6    | 38               | 44   | 57   | FT  | 25-400         |
| M18                | 2.5   | 27.0      | 30.14       | 18.1   | 11.5   | 0.6    | 42               | 48   | 61   | FT  | 35-200         |
| M20                | 2.5   | 30.0      | 33.53       | 20.0   | 12.5   | 0.8    | 46               | 52   | 65   | FT  | 30-400         |
| M22                | 2.5   | 32.0-34.0 | 35.72-37.72 | 22.0   | 14.0   | 0.8    | 50               | 56   | 69   | FT  | 40-200         |
| M24                | 3.0   | 36.0      | 39.98       | 24.0   | 15.0   | 0.8    | 54               | 60   | 73   | FT  | 50-450         |
| M27                | 3.0   | 41.0      | 45.20       | 27.0   | 17.0   | 1.0    | 60               | 66   | 79   | FT  | 60-300         |
| M30                | 3.5   | 46.0      | 50.85       | 30.0   | 18.7   | 1.0    | 66               | 72   | 85   | FT  | 60-400         |
| M33                | 3.5   | 50.0      | 55.37       | 33.0   | 21.0   | 1.0    | 72               | 78   | 91   | FT  | 75-500         |
| M36                | 4.0   | 55.0      | 60.79       | 36.0   | 22.5   | 1.0    | 78               | 84   | 97   | FT  | 80-500         |
| M39                | 4.0   | 60.0      | 66.44       | 39.0   | 25.0   | 1.0    | 84               | 90   | 103  | FT  | 80-500         |
| M42                | 4.5   | 65.0      | 72.02       | 42.0   | 26.0   | 1.2    | 90               | 96   | 109  | FT  | 90-500         |
| M45                | 4.5   | 69.5      | 77.00       | 45.0   | 27.8   | 1.2    | 90               | 96   | 109  | FT  | 90-500         |

Coating : Electro Galvanized, Cadmium Plated, Black & Hot Dip Galvanized

Grade : 4.8, 6.8, 8.8, 10.9, 12.9, AISI SS304, SS316, SS316S31, Grade : 8.8, 10.9



## HEXAGON HEAD BOLT / SCREW DIN 931/933 (UNC THREAD)



### DIMENSIONS :

#### Note :

1. The bolts & Screw will generally confirm to ANSI / ASME B18.2.1.
2. Threads will confirm to class 2A of ANSI B1.1 Coarse Series.
3. Material : Low Carbon Steel.
4. Heat Treatment : Property Class 8.8 or 10.9\*
5. Bolt Length equal to or shorter than listed in column 'LFT' will be fully threaded.
6. All dimensions are in inches.

| Normal Thread Size | TPI UNC | W Max. | C Min. | B Max. | H Nom. | R Min. | Length of Thread |        |     | Length Range |
|--------------------|---------|--------|--------|--------|--------|--------|------------------|--------|-----|--------------|
|                    |         |        |        |        |        |        | L < 6"           | L > 6" | LFT |              |
| 1/4"               | 20      | 0.375  | 0.433  | 0.259  | 3/16"  | 0.01   | 1.00"            | 1.25"  | FT  | 1/2"-6"      |
| 5/16"              | 18      | 0.468  | 0.542  | 0.323  | 7/32"  | 0.01   | 1.00"            | 1.25"  | FT  | 1/2"-6"      |
| 3/8"               | 16      | 0.562  | 0.650  | 0.388  | 1/4"   | 0.01   | 1-1/2"           | 1-1/4" | FT  | 1/2"-6"      |
| 1/2"               | 13      | 0.750  | 0.866  | 0.515  | 11/32" | 0.01   | 1-1/4"           | 1-1/2" | FT  | 3/4"-12"     |
| 5/8"               | 11      | 0.938  | 1.083  | 0.642  | 27/64" | 0.02   | 1-1/2"           | 2"     | FT  | 1"-12"       |
| 3/4"               | 10      | 1.125  | 1.299  | 0.768  | 1/2"   | 0.02   | 1-3/4"           | 2-1/4" | FT  | 1-1/2"-12"   |
| 7/8"               | 9       | 1.312  | 1.516  | 0.895  | 37/64" | 0.02   | 2"               | 2-1/2" | FT  | 1-1/2"-12"   |
| 1"                 | 8       | 1.500  | 1.732  | 1.022  | 43/64" | 0.02   | 2-1/4"           | 3"     | FT  | 1-1/2"-12"   |
| 1-1/8"             | 7       | 1.688  | 1.949  | 1.149  | 3/4"   | 0.03   | 2-1/2"           | 3-1/4" | FT  | 2"-12"       |
| 1-1/4"             | 7       | 1.875  | 2.165  | 1.277  | 27/32" | 0.03   | 2-3/4"           | 4"     | FT  | 2"-12"       |
| 1-3/8"             | 6       | 2.062  | 2.382  | 1.404  | 29/32" | 0.03   | 3"               | 4-1/2" | FT  | 2-1/2"-12"   |
| 1-1/2"             | 6       | 2.250  | 2.598  | 1.531  | 1"     | 0.03   | 3-1/4"           | 5"     | FT  | 2-1/2"-12"   |

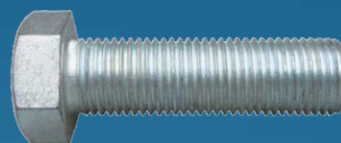
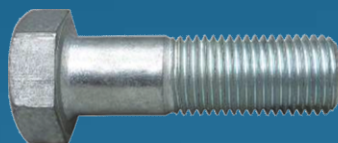
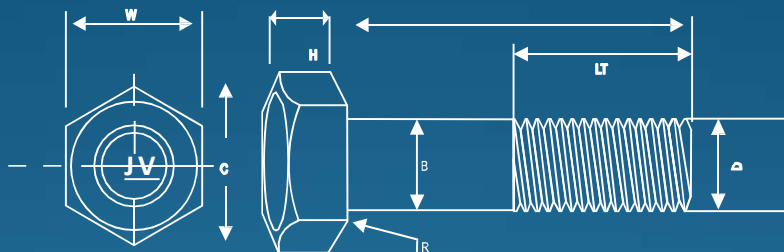
**Coating :** Electro Galvanized, Cadmium Plated, Black & Hot Dip Galvanized

**Grade :** 4.8, 5.8, A307-A, A307-B, SS304, SS316





## HEXAGON HEAD BOLT / SCREW ASTM A307-'A'



### DIMENSIONS :

### Note :

1. The bolts & Screw will generally confirm to ANSI / ASME B18.2.1.
2. Threads will confirm to class 2A of ANSI B1.1 Coarse Series.
3. Material : Low Carbon Steel.
4. Bolt Length equal to or shorter than listed in column 'LFT' will be fully threaded.
5. All dimensions are in inches.

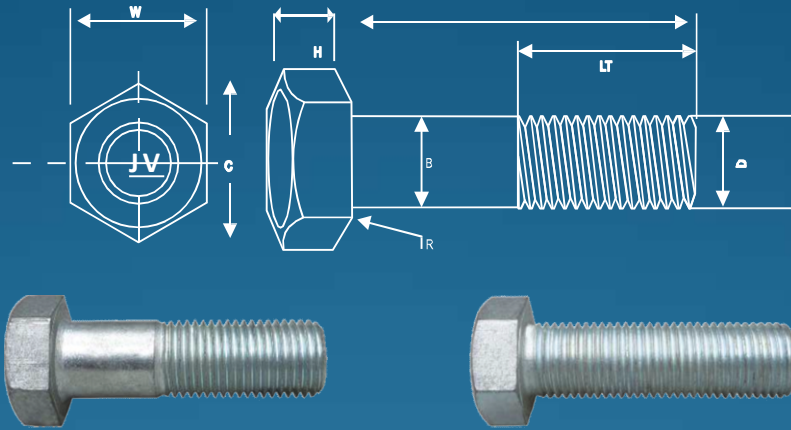
| Normal Thread Size | TPI UNC | W Max. | C Min. | B Max. | H Nom. | R Min. | Length of Thread |        |     | Length Range |
|--------------------|---------|--------|--------|--------|--------|--------|------------------|--------|-----|--------------|
|                    |         |        |        |        |        |        | L < 6"           | L > 6" | LFT |              |
| 1/4"               | 20      | 0.375  | 0.433  | 0.259  | 3/16"  | 0.01   | 1                | 1.25   | FT  | 1/2"-6"      |
| 5/16"              | 18      | 0.468  | 0.542  | 0.323  | 7/32"  | 0.01   | 1                | 1.25   | FT  | 1/2"-6"      |
| 3/8"               | 16      | 0.562  | 0.650  | 0.388  | 1/4"   | 0.01   | 1.00             | 1.25   | FT  | 1/2"-8"      |
| 1/2"               | 13      | 0.750  | 0.866  | 0.515  | 11/32" | 0.01   | 1.25             | 1.50   | FT  | 3/4"-12"     |
| 5/8"               | 11      | 0.938  | 1.083  | 0.642  | 27/64" | 0.02   | 1.50             | 1.75   | FT  | 1"-12"       |
| 3/4"               | 10      | 1.125  | 1.299  | 0.768  | 1/2"   | 0.02   | 1.75             | 2.00   | FT  | 1-1/2"-12"   |
| 7/8"               | 9       | 1.312  | 1.516  | 0.895  | 37/64" | 0.02   | 2.00             | 2.25   | FT  | 1-1/2"-12"   |
| 1"                 | 8       | 1.500  | 1.732  | 1.022  | 43/64" | 0.02   | 2.25             | 2.50   | FT  | 1-1/2"-12"   |
| 1-1/8"             | 7       | 1.688  | 1.949  | 1.149  | 3/4"   | 0.03   | 2.50             | 2.75   | FT  | 2"-12"       |
| 1-1/4"             | 7       | 1.875  | 2.165  | 1.277  | 27/32" | 0.03   | 2.75             | 3.00   | FT  | 2"-12"       |
| 1-3/8"             | 6       | 2.062  | 2.382  | 1.404  | 29/32" | 0.03   | 3.00             | 3.25   | FT  | 2-1/2"-12"   |
| 1-1/2"             | 6       | 2.250  | 2.598  | 1.531  | 1"     | 0.03   | 3.25             | 3.50   | FT  | 2-1/2"-12"   |

Coating : Electro Galvanized, Cadmium Plated, Black & Hot Dip Galvanized

Grade : ASTM A307-A



## HEXAGON HEAD BOLT / SCREW ASTM A307-'B'



### DIMENSIONS :

#### Note :

1. The bolts & Screw will generally conform to ANSI / ASME B18.2.1.
2. Threads will confirm to class 2A of ANSI B1.1 Coarse Series.
3. Material : Low Carbon Steel.
4. Bolt Length equal to or shorter than listed in column 'LFT' will be fully threaded.
5. All dimensions are in inches.

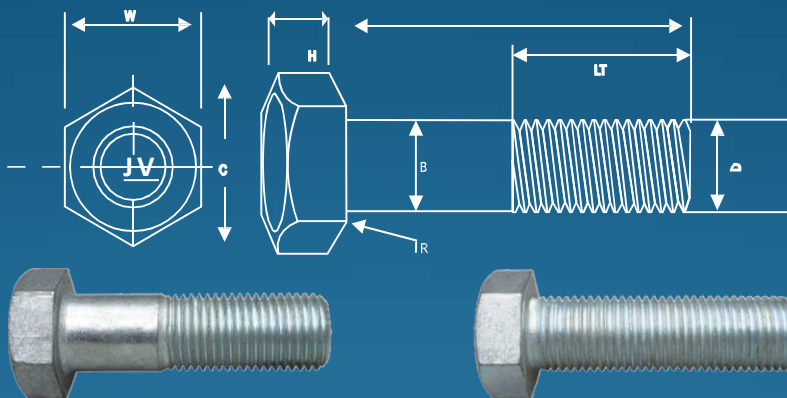
| Normal Thread Size | TPI UNC | W Max. | C Min. | B Max. | H Nom. | R Min. | Length of Thread |        |     | Length Range |
|--------------------|---------|--------|--------|--------|--------|--------|------------------|--------|-----|--------------|
|                    |         |        |        |        |        |        | L < 6"           | L > 6" | LFT |              |
| 3/8"               | 16      | 0.656  | 0.757  | 0.388  | 1/4"   | 0.01   | 1.00             | 1.25   | FT  | 1/2"-8"      |
| 1/2"               | 13      | 0.875  | 1.010  | 0.515  | 11/32" | 0.01   | 1.25             | 1.50   | FT  | 3/4"-12"     |
| 5/8"               | 11      | 1.062  | 1.227  | 0.642  | 27/64" | 0.02   | 1.50             | 1.75   | FT  | 1"-12"       |
| 3/4"               | 10      | 1.250  | 1.443  | 0.768  | 1/2"   | 0.02   | 1.75             | 2.00   | FT  | 1-1/2"-12"   |
| 7/8"               | 9       | 1.438  | 1.660  | 0.895  | 37/64" | 0.02   | 2.00             | 2.25   | FT  | 1-1/2"-12"   |
| 1"                 | 8       | 1.625  | 1.876  | 1.022  | 43/64" | 0.03   | 2.25             | 2.50   | FT  | 1-1/2"-12"   |
| 1-1/8"             | 7       | 1.812  | 2.093  | 1.149  | 3/4"   | 0.03   | 2.50             | 2.75   | FT  | 2"-16"       |
| 1-1/4"             | 7       | 2.000  | 2.309  | 1.277  | 27/32" | 0.03   | 2.75             | 3.00   | FT  | 2"-16"       |
| 1-3/8"             | 6       | 2.188  | 2.526  | 1.404  | 29/32" | 0.03   | 3.00             | 3.25   | FT  | 2-1/2"-16"   |
| 1-1/2"             | 6       | 2.375  | 2.742  | 1.531  | 1"     | 0.03   | 3.25             | 3.50   | FT  | 2-12"-16"    |
| 1-5/8"             | 5       | 2.618  | 3.022  | 1.680  | 1.10"  | 0.03   | 3.50             | 3.75   | FT  | 3"-16"       |
| 1-3/4"             | 5       | 2.805  | 3.238  | 1.800  | 1.18"  | 0.04   | 3.50             | 3.75   | FT  | 3-1/2"-16"   |
| 1-7/8"             | 4.5     | 3.000  | 3.450  | 1.928  | 1.26"  | 0.04   | 4.00             | 4.25   | FT  | 4"-16"       |
| 2"                 | 4.5     | 3.160  | 3.650  | 2.041  | 1.33"  | 0.04   | 4.25             | 4.50   | FT  | 4-1/2"-16"   |
| 2-1/4"             | 4.5     | 3.550  | 4.100  | 2.100  | 1.495" | 0.04   | 5.00             | 5.25   | FT  | 5"-16"       |
| 2-1/2"             | 4.0     | 3.950  | 4.570  | 2.234  | 1.66"  | 0.04   | 5.50             | 5.75   | FT  | 5-1/2"-16"   |

**Coating :** Electro Galvanized, Cadmium Plated, Black & Hot Dip Galvanized

**Grade :** ASTM A307-"B"



## HEAVY HEXAGON HEAD BOLT / SCREW ASTM A325M



### DIMENSIONS :

- Note :**
1. The bolts will generally conform to ANSI / ASME B18.2.3.7M.
  2. Threads will conform to class 6g of ANSI B.1.1.3M Coarse Series.
  3. Material : High Carbon Steel / Alloy Steel.
  4. Heat Treatment as per ASTM A325M or ASTM F568m Class 8.8
  5. Thread Length LT. LT1 for L<100 LT2 for L>100
  6. All dimensions are in millimeters.



| Thread Size | TPI UNC | W Max. | C Min. | B Max. | H Nom. | R Min. | Length of Thread |      |     | Length Range |
|-------------|---------|--------|--------|--------|--------|--------|------------------|------|-----|--------------|
|             |         |        |        |        |        |        | LT-1             | LT-2 | LFT |              |
| M 10        | 1.50    | 18.00  | 20.00  | 9.50   | 6.50   | 0.50   | 25               | 25   | FT  | 25-100       |
| M 12        | 1.75    | 22.00  | 25.40  | 12.70  | 8.00   | 0.60   | 25               | 25   | FT  | 25-150       |
| M 16        | 2.00    | 27.00  | 31.88  | 16.70  | 10.00  | 0.60   | 31               | 38   | FT  | 30-300       |
| M 20        | 2.50    | 34.00  | 39.26  | 20.84  | 12.50  | 0.80   | 36               | 43   | FT  | 35-300       |
| M 22        | 2.50    | 36.00  | 41.57  | 22.84  | 14.00  | 0.80   | 38               | 45   | FT  | 40-300       |
| M 24        | 3.00    | 41.00  | 47.34  | 24.84  | 15.00  | 1.00   | 41               | 48   | FT  | 40-300       |
| M 27        | 3.00    | 46.00  | 52.12  | 27.84  | 17.00  | 1.20   | 44               | 51   | FT  | 60-300       |
| M 30        | 3.50    | 50.00  | 57.74  | 30.84  | 18.70  | 1.20   | 49               | 56   | FT  | 60-400       |
| M 36        | 4.00    | 60.00  | 69.28  | 37.00  | 22.50  | 1.50   | 56               | 63   | FT  | 70-300       |
| M 39        | 4.00    | 65.00  | 75.00  | 39.50  | 24.37  | 1.62   | 61               | 68   | FT  | 75-300       |

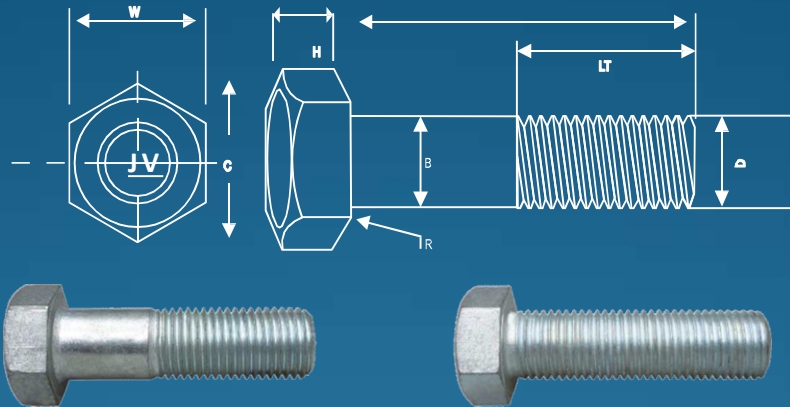
**Coating :** Electro Galvanized, Black & Hot Dip Galvanized

**Grade :** ASTM A325M





## HEAVY HEXAGON HEAD STRUCTURAL BOLT ASTM A490



### DIMENSIONS :

#### Note :

1. The bolts will generally confirm to ANSI / ASME B18.2.1
2. Threads will confirm to class 2A of ANSI B.1.1 Coarse Series.
3. Material : Alloy Steel.
4. Heat Treatment as per ASTM A490-Type-1.
5. All dimensions are in Inches.

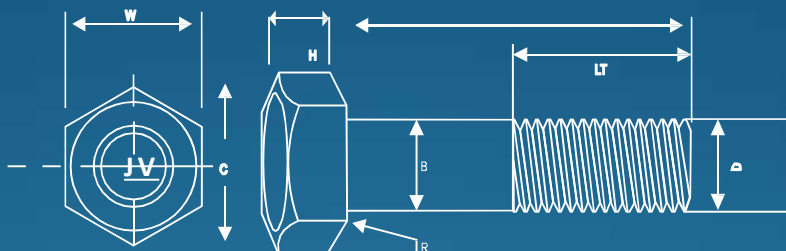
| Normal<br>Thread<br>Size | TPI<br>UNC | W<br>Max. | C<br>Min. | B<br>Max. | H<br>Nom. | R<br>Min. | Length of Thread | Length<br>Range |
|--------------------------|------------|-----------|-----------|-----------|-----------|-----------|------------------|-----------------|
|                          |            |           |           |           |           |           | LT               |                 |
| 1/2"                     | 13         | 0.875     | 1.010     | 0.515     | 5/16"     | 0.009"    | 1.00"            | 1-1/2"-4"       |
| 5/8"                     | 11         | 1.062     | 1.227     | 0.642     | 25/64"    | 0.021"    | 1.25"            | 1-1/2"-8"       |
| 3/4"                     | 10         | 1.250     | 1.443     | 0.768     | 15/32"    | 0.021"    | 1.38"            | 1-1/2"-8"       |
| 7/8"                     | 9          | 1.438     | 1.660     | 0.895     | 35/64"    | 0.031"    | 1.50"            | 1-1/2"-8"       |
| 1"                       | 8          | 1.625     | 1.876     | 1.022     | 39/64"    | 0.062"    | 1.75"            | 1-1/2"-8"       |
| 1-1/8"                   | 8          | 1.812     | 2.093     | 1.149     | 11/16"    | 0.062"    | 2.00"            | 2"-8"           |
| 1-1/4"                   | 8          | 2.000     | 2.309     | 1.277     | 25/32"    | 0.062"    | 2.00"            | 2"-8"           |
| 1-3/8"                   | 8          | 2.188     | 2.526     | 1.404     | 27/32"    | 0.062"    | 2.00"            | 2-1/2"-8"       |
| 1-1/2"                   | 8          | 2.375     | 2.742     | 1.531     | 25/32"    | 0.062"    | 2.00"            | 2-1/2"-8"       |

Coating : Electro Galvanized, Black & Hot Dip Galvanized

Grade : ASTM A490



## HEAVY HEXAGON HEAD STRUCTURAL BOLT ASTM A490M



### DIMENSIONS :

### Note :

1. The bolts will generally confirm to ANSI / ASME B18.2.3.7M.
2. Threads will confirm to class 6g of ANSI B.1.1.3M Coarse Series.
3. Material : Alloy Steel.
4. Heat Treatment as per ASTM A490M or ASTM F568m Class 8.10.9
5. Thread Length LT. LT1 for L<100 LT2 for L>100
6. All dimensions are in millimeters.

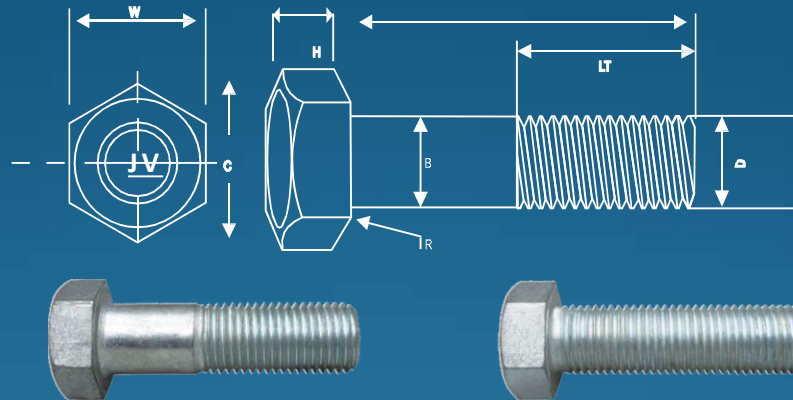
| Normal Thread Size | Pitch | W Max. | C Min. | B Max. | H Nom. | R Min. | Length of Thread |      | Length Range L |
|--------------------|-------|--------|--------|--------|--------|--------|------------------|------|----------------|
|                    |       |        |        |        |        |        | LT-1             | LT-2 |                |
| M 12               | 1.75  | 22.00  | 25.40  | 12.70  | 8.00   | 0.60   | 25               | 25   | 30-100         |
| M 16               | 2.00  | 27.00  | 31.88  | 16.70  | 10.0   | 0.60   | 31               | 38   | 30-300         |
| M 20               | 2.50  | 34.00  | 39.26  | 20.84  | 12.5   | 0.80   | 36               | 43   | 35-300         |
| M 22               | 2.50  | 36.00  | 41.57  | 22.84  | 14.0   | 0.80   | 38               | 45   | 50-200         |
| M 24               | 3.00  | 41.00  | 47.34  | 24.84  | 15.0   | 1.00   | 41               | 48   | 40-200         |
| M 27               | 3.00  | 46.00  | 52.12  | 27.84  | 17.0   | 1.20   | 44               | 51   | 60-300         |
| M 30               | 3.50  | 50.00  | 57.74  | 30.84  | 18.7   | 1.20   | 49               | 56   | 60-400         |
| M 36               | 4.00  | 60.00  | 69.28  | 37.00  | 22.50  | 1.50   | 56               | 63   | 70-300         |
| M 39               | 4.00  | 65.00  | 75.00  | 39.5   | 24.37  | 1.62   | 61               | 68   | 75-300         |

Coating : Electro Galvanized, Black & Hot Dip Galvanized

Grade : ASTM A490M



## HIGH STRENGTH HEXAGON HEAD BOLT DIN 6914



### DIMENSIONS :

### Note :

1. The bolts will generally confirm DIN 6914.
2. Threads will confirm to class 6g of DIN 13 Coarse Series.
3. Material : High Grade Carbon / Alloy Steel.
4. Heat Treatment : To achieve mechanical properties of Class 10.9
5. Thread Length LT, LT1 & LT2.
6. All dimensions are in millimeters.

| Normal<br>Thread<br>Size | Pitch | W<br>Max. | C<br>Min. | B<br>Max. | H<br>Nom. | R<br>Min. | Length of Thread |      | Length<br>Range<br>L |
|--------------------------|-------|-----------|-----------|-----------|-----------|-----------|------------------|------|----------------------|
|                          |       |           |           |           |           |           | LT-1             | LT-2 |                      |
| M 12                     | 1.75  | 22.00     | 23.91     | 12.70     | 8.00      | 1.20      | 25               | 25   | 30-200               |
| M 16                     | 2.00  | 27.00     | 29.56     | 16.70     | 10.0      | 1.20      | 31               | 38   | 35-200               |
| M 20                     | 2.50  | 34.00     | 35.03     | 20.84     | 12.5      | 1.50      | 36               | 43   | 40-300               |
| M 22                     | 2.50  | 36.00     | 39.55     | 22.84     | 14.0      | 1.50      | 38               | 45   | 50-200               |
| M 24                     | 3.00  | 41.00     | 45.20     | 24.84     | 15.0      | 1.50      | 41               | 48   | 50-300               |
| M 27                     | 3.00  | 46.00     | 50.85     | 27.84     | 17.0      | 2.00      | 44               | 51   | 60-200               |
| M 30                     | 3.50  | 50.00     | 55.37     | 30.84     | 18.7      | 2.00      | 49               | 56   | 60-300               |
| M 36                     | 4.00  | 60.00     | 66.44     | 37.00     | 22.50     | 2.00      | 56               | 63   | 70-300               |
| M 39                     | 4.00  | 65.00     | 75.00     | 39.5      | 24.37     | 1.62      | 61               | 68   | 75-300               |

Coating : Electro Galvanized, Black & Hot Dip Galvanized

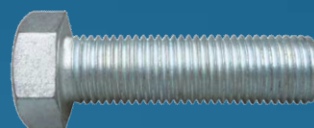
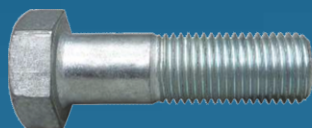
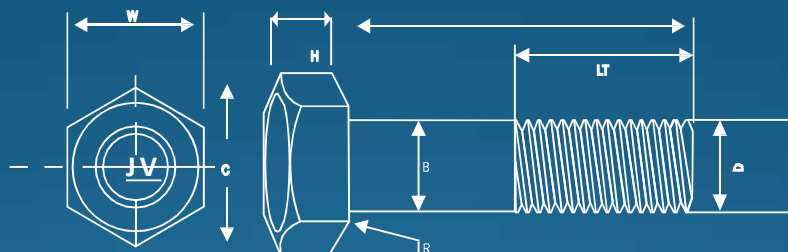
Grade : DIN 6914





## HEXAGON HEAD BOLT / SCREWS

BS 4190



### DIMENSIONS :

#### Note :

1. The bolts AND Screws will generally confirm to BS 4190.
2. Threads will confirm to Class 6g BS 4190 Coarse Series.
3. Material : Carbon / Alloy Steel.
4. Thread Length LT. LT1 for L<125
5. LT2 for L>125 to 200
6. LT3 for L>200
7. In Bolts / Nut assembly, tightening should be done by rotation of nuts.
8. All dimensions are in millimeters.

| Normal Thread Size | Pitch | W Max.    | C Min.      | B Max. | H Nom. | R Min. | LT-1 | Length of Thread |      |     | Length Range L |
|--------------------|-------|-----------|-------------|--------|--------|--------|------|------------------|------|-----|----------------|
|                    |       |           |             |        |        |        |      | LT-2             | LT-3 | LFT |                |
| M 06               | 1.00  | 10.0      | 11.05       | 6.0    | 4.0    | 0.25   | 18   | -                | -    | 25  | 10-150         |
| M 08               | 1.25  | 13.0      | 14.98       | 8.0    | 5.3    | 0.4    | 22   | 28               | -    | 30  | 12-150         |
| M 10               | 1.5   | 17.0-16.0 | 18.90-17.80 | 10.0   | 6.4    | 0.4    | 26   | 32               | 45   | 35  | 16-250         |
| M 12               | 1.75  | 19.0-18.0 | 21.10-20.03 | 12.0   | 7.5    | 0.6    | 30   | 36               | 49   | 40  | 20-250         |
| M 16               | 2.0   | 24.0      | 26.75       | 16.0   | 10.0   | 0.6    | 38   | 44               | 57   | 50  | 25-400         |
| M 20               | 2.5   | 30.0      | 33.53       | 20.0   | 12.5   | 0.8    | 46   | 52               | 65   | 60  | 30-400         |
| M 22               | 2.5   | 32.0-34.0 | 35.72.37.72 | 22.0   | 14.0   | 0.8    | 50   | 56               | 69   | 65  | 40-200         |
| M 24               | 3.0   | 36.0      | 39.98       | 24.0   | 15.0   | 0.8    | 54   | 60               | 73   | 75  | 50-450         |
| M 27               | 3.0   | 41.0      | 45.20       | 27.0   | 17.0   | 1.0    | 60   | 66               | 79   | 85  | 60-300         |
| M 30               | 3.5   | 46.0      | 50.85       | 30.0   | 18.7   | 1.0    | 66   | 72               | 85   | 85  | 60-400         |
| M 33               | 3.5   | 50.0      | 55.37       | 33.0   | 21.0   | 1.0    | 72   | 78               | 91   | 95  | 75-500         |
| M 36               | 4.0   | 55.0      | 60.79       | 36.0   | 22.5   | 1.0    | 78   | 84               | 97   | 100 | 80-500         |
| M 39               | 4.0   | 60.0      | 66.44       | 39.0   | 25.0   | 1.0    | 84   | 90               | 103  | 110 | 80-500         |
| M 42               | 4.5   | 65.0      | 72.02       | 42.0   | 26.0   | 1.2    | 90   | 96               | 109  | 120 | 90-500         |

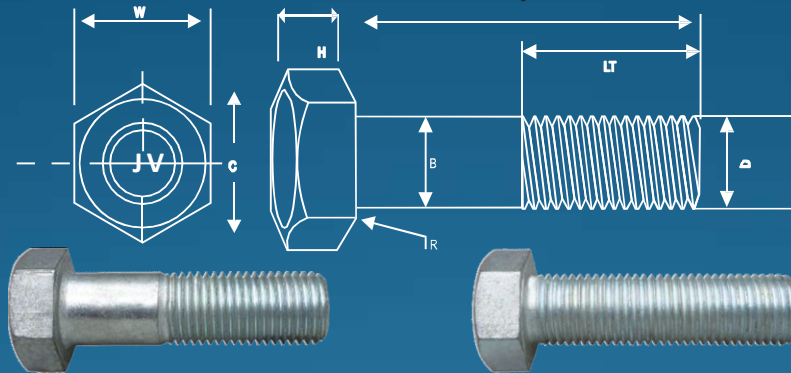
Coating : Electro Galvanized, Black & Hot Dip Galvanized

Grade : BS 4190



## HEXAGON HEAD BOLT / SCREWS

BS 3692



### DIMENSIONS :

#### Note :

- The bolts and Screws will generally conform to BS 3692.
- Threads will conform to Class 6g BS 3643 Coarse Series.
- Material : Carbon / Alloy Steel.
- Thread Length LT.
  - LT1 for L<125
  - LT2 for L>125 to 200
  - LT3 for L>200
- In Bolts / Nut assembly, tightening should be done by rotation of nuts.
- All dimensions are in millimeters.

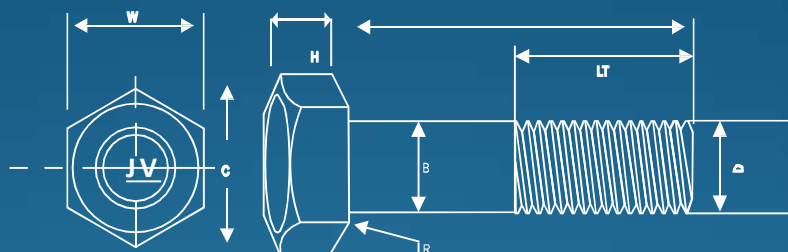
| Normal Thread Size | Pitch | W Max.    | C Min.      | B Max. | H Nom. | R Min. | Length of Thread |      |      |     | Length Range L |
|--------------------|-------|-----------|-------------|--------|--------|--------|------------------|------|------|-----|----------------|
|                    |       |           |             |        |        |        | LT-1             | LT-2 | LT-3 | LFT |                |
| M 06               | 1.00  | 10.0      | 11.05       | 6.0    | 4.0    | 0.25   | 18               | -    | -    | 25  | 10-150         |
| M 08               | 1.25  | 13.0      | 14.98       | 8.0    | 5.3    | 0.4    | 22               | 28   | -    | 30  | 12-150         |
| M 10               | 1.50  | 17.0-16.0 | 18.90-17.80 | 10.0   | 6.4    | 0.4    | 26               | 32   | 45   | 35  | 16-250         |
| M 12               | 1.75  | 19.0-18.0 | 21.10-20.03 | 12.0   | 7.5    | 0.6    | 30               | 36   | 49   | 40  | 20-250         |
| M 14               | 2.00  | 22.0-21.0 | 24.49-23.25 | 14.0   | 8.8    | 0.6    | 34               | 40   | 53   | 45  | 25-200         |
| M 16               | 2.00  | 24.0      | 26.75       | 16.0   | 10.0   | 0.6    | 38               | 44   | 57   | 50  | 25-400         |
| M 18               | 2.50  | 27.0      | 30.14       | 18.0   | 11.5   | 0.6    | 42               | 48   | 61   | 60  | 35-200         |
| M 20               | 2.50  | 30.0      | 33.53       | 20.0   | 12.5   | 0.8    | 46               | 52   | 65   | 60  | 30-400         |
| M 22               | 2.50  | 32.0-34.0 | 35.72-35.72 | 22.0   | 14.0   | 0.8    | 50               | 56   | 69   | 65  | 40-200         |
| M 24               | 3.00  | 36.0      | 39.98       | 24.0   | 15.0   | 0.8    | 54               | 60   | 73   | 75  | 50-450         |
| M 27               | 3.00  | 41.0      | 45.20       | 27.0   | 17.0   | 1.0    | 60               | 66   | 79   | 85  | 60-300         |
| M 30               | 3.50  | 46.0      | 50.85       | 30.0   | 18.7   | 1.0    | 66               | 72   | 85   | 85  | 60-400         |
| M 33               | 3.50  | 50.0      | 55.37       | 33.0   | 21.0   | 1.0    | 72               | 78   | 91   | 95  | 75-500         |
| M 36               | 4.00  | 55.0      | 60.79       | 36.0   | 22.5   | 1.0    | 78               | 84   | 97   | 100 | 80-500         |
| M 39               | 4.00  | 60.0      | 66.44       | 39.0   | 25.0   | 1.0    | 84               | 90   | 103  | 110 | 80-500         |
| M 42               | 4.50  | 65.0      | 72.02       | 42.0   | 26.0   | 1.2    | 90               | 96   | 109  | 120 | 90-500         |

Coating : Electro Galvanized, Black & Hot Dip Galvanized

Grade : BS 3692



## HIGH STRENGTH HEXAGON HEAD BOLT DIN 7990



### DIMENSIONS :

#### Note :

1. The bolts and Screws will generally confirm to DIN 7990.
2. Threads will confirm to Class 6g of DIN 13 Coarse Series.
3. Material : Carbon / Alloy Steel.
4. Thread Length LT.
5. Heat Treatment : To achieve Mechanical properties of Class 4.6, 5.8, 6.8, 8.8, 10.9.
6. All dimensions are in millimeters.

| Normal Thread Size | Pitch | W Max. | C Min. | B Max. | H Nom. | R Min. | Length of Thread |  | Length Range L |
|--------------------|-------|--------|--------|--------|--------|--------|------------------|--|----------------|
|                    |       |        |        |        |        |        | L T-1            |  |                |
| M 12               | 1.75  | 19.0   | 21.10  | 12.70  | 8.00   | 0.60   | 17.75            |  | 25-120         |
| M 16               | 2.00  | 24.0   | 26.16  | 16.70  | 10.0   | 0.60   | 21.00            |  | 30-150         |
| M 20               | 2.50  | 30.0   | 32.95  | 20.84  | 12.5   | 0.80   | 23.50            |  | 35-200         |
| M 22               | 2.50  | 32.0   | 35.03  | 22.84  | 14.0   | 0.80   | 25.50            |  | 45-200         |
| M 24               | 3.00  | 36.0   | 39.55  | 24.84  | 15.0   | 0.80   | 26.00            |  | 50-200         |
| M 27               | 3.00  | 41.0   | 45.20  | 27.84  | 17.0   | 1.00   | 29.00            |  | 70-200         |
| M 30               | 3.50  | 46.0   | 50.85  | 30.84  | 19.0   | 1.00   | 30.50            |  | 80-300         |

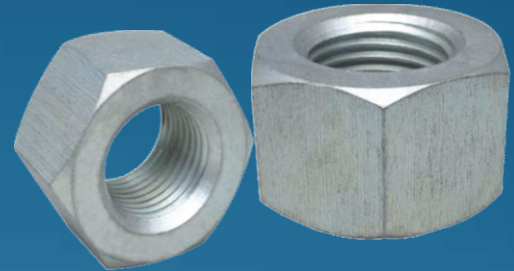
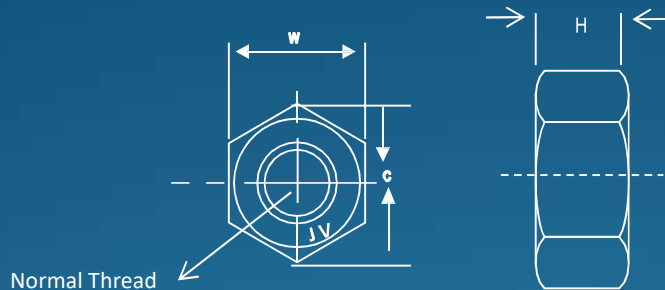
Coating : Electro Galvanized, Black & Hot Dip Galvanized

Grade : DIN 7990





## HEXAGON NUTS ISO 934 / DIN 555



### Dimensions :

#### Note :

1. The Nut will generally confirm to DIN 934, DIN 555, BS3692
  2. Thread will confirm to class 6H of DIN 13 Coarse Series.
  3. Heat Treatment to achieve mechanical properties to property Class 8 or 10
  4. Nuts of property Class 8 are used with bolts of property Class 8.8.
  5. Nuts of property Class 10 are used with bolts of property Class 10.9.
- (In general nuts of a higher property class can replace nut of lower property class in a joint)
6. In Bolts/Nuts assembly tightening should be done by rotation of nuts.
  7. All dimensions are in millimeters.

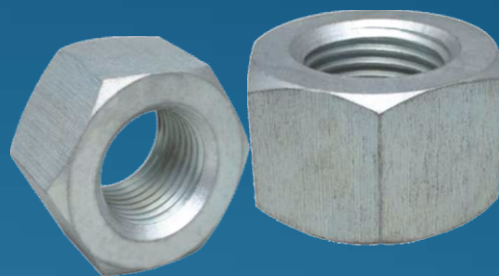
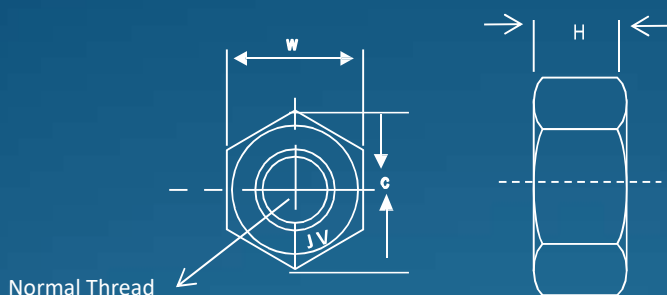
| Thread Size | Pitch | W Max. | C Max. | H Norm. |
|-------------|-------|--------|--------|---------|
| M06         | 1.00  | 10.00  | 11.05  | 5.00    |
| M08         | 1.25  | 13.00  | 14.38  | 6.50    |
| M10         | 1.50  | 17.00  | 18.90  | 8.00    |
| M12         | 1.75  | 19.00  | 21.00  | 10.00   |
| M14         | 2.00  | 22.00  | 24.49  | 11.00   |
| M16         | 2.00  | 24.00  | 26.75  | 13.00   |
| M18         | 2.50  | 27.00  | 29.56  | 15.00   |
| M20         | 2.50  | 30.00  | 32.95  | 16.00   |
| M22         | 2.50  | 32.00  | 35.03  | 18.00   |
| M24         | 3.00  | 36.00  | 39.55  | 19.00   |
| M27         | 3.00  | 41.00  | 45.20  | 22.00   |
| M30         | 3.50  | 46.00  | 50.85  | 24.00   |
| M33         | 3.50  | 50.00  | 55.37  | 26.00   |
| M36         | 4.00  | 55.00  | 60.79  | 29.00   |
| M39         | 4.00  | 60.00  | 66.44  | 31.00   |
| M42         | 4.50  | 65.00  | 71.30  | 34.00   |
| M45         | 4.50  | 69.64  | 76.25  | 36.40   |
| M48         | 5.00  | 74.28  | 81.40  | 38.75   |
| M52         | 5.00  | 80.00  | 88.00  | 51.00   |
| M56         | 5.50  | 86.50  | 96.00  | 54.75   |
| M60         | 5.50  | 92.85  | 101.50 | 58.50   |
| M64         | 6.00  | 99.00  | 108.00 | 62.25   |

**Coating :** Electro Galvanized, Black , Hot Dip Galvanized, Cadmium Plate

**Grade :** 4, 6, 8, 10, SS304, SS316



## HEAVY HEXGON NUTS ASTM A563 / GR A&C



### Dimensions in Inch series UNC/ UNF:

#### Note :

1. The Nut will generally confirm to ANSI 18.2.2 heavy Hex Nuts.
2. Thread will confirm to class 2B of ANSI B1.1.
3. In Bolts/Nuts assembly tightening should be done by rotation of nuts.  
Torque values as recommended in tables for bolt.
4. All dimensions are in inches.

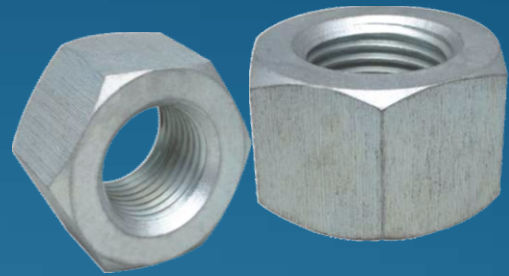
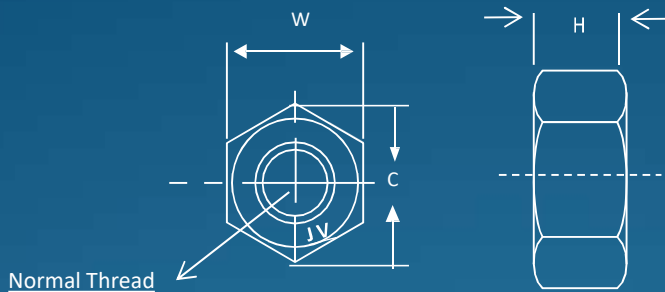
| Thread Size | PTI UNC/UN | W Max. | C Max. | H Norm. |
|-------------|------------|--------|--------|---------|
| 3/8"        | 16         | 0.656" | 0.757" | 0.375"  |
| 1/2"        | 13         | 0.875" | 1.010" | 0.484"  |
| 9/16"       | 12         | 0.938" | 1.083" | 0.547"  |
| 5/8"        | 11         | 1.062" | 1.227" | 0.609"  |
| 3/4"        | 10         | 1.250" | 1.443" | 0.734"  |
| 7/8"        | 9          | 1.238" | 1.660" | 0.859"  |
| 1"          | 8          | 1.625" | 1.876" | 0.984"  |
| 1-1/8"      | 7          | 1.812" | 2.093" | 1.109"  |
| 1-1/4"      | 7          | 2.000" | 2.309" | 1.219"  |
| 1-3/8"      | 6          | 2.188" | 2.526" | 1.344"  |
| 1-1/2"      | 6          | 2.375" | 2.742" | 1.469"  |
| 1-5/8"      | 5          | 2.562" | 2.959" | 1.594"  |
| 1-3/4"      | 5          | 2.750" | 3.175" | 1.719"  |
| 1-7/8"      | 4.5        | 2.938" | 3.392" | 1.844"  |
| 2"          | 4.5        | 3.125" | 3.608" | 1.969"  |
| 2-1/4"      | 4          | 3.500" | 4.041" | 2.203"  |
| 2-1/2"      | 4          | 3.875" | 4.474" | 2.453"  |
| 2-3/4"      | 4          | 4.250" | 4.907" | 2.703"  |
| 3"          | 4          | 4.625" | 5.340" | 2.953"  |
| 3-1/4"      | 4          | 5.000" | 5.774" | 3.188"  |
| 3-1/2"      | 4          | 5.375" | 6.207" | 3.438"  |
| 3-3/4"      | 4          | 5.755" | 6.650" | 3.683"  |
| 4"          | 4          | 6.142" | 7.093" | 3.930"  |

**Coating :** Electro Galvanized, Black & Hot Dip

**Grade :** ASTM A563, GR A & C



## HEAVY HEXGON NUTS A563M (10S)



### Dimensions :

#### Note :

1. The Nut will generally confirm to ANSI B18.2.4.6M metric Heavy Hex Nuts.
2. Thread will confirm to class 6H of ANSI B1.13M for Coarse Series.
3. Heat Treatment to achieve mechanical properties to property Class 8S or 10S of A563M.
4. Nuts of property Class 8S are used with bolts of ASTM A325M Type-1 and 2 (Con Coated).
5. Nuts of property Class 10S are used with bolts of ASTM A325M Type-1 and 2 (Zinc Coated).  
(In general nuts of a higher property class can replace nut of lower property class in a joint)
6. In Bolts/Nuts assembly tightening should be done by rotation of nuts.
7. Sizes in brackets are non preferred standards.
8. All dimensions are in millimeters.

| Nominal Nut Diameter and Thread Pitch | Width Across Flats, W |       | Width Across Flats, C |        | Thickness H |      | Bearing Face Diameter, Dw, Min | Washer Face Thickness, d |     |
|---------------------------------------|-----------------------|-------|-----------------------|--------|-------------|------|--------------------------------|--------------------------|-----|
|                                       | Max                   | Min   | Max                   | Min    | Max         | Min  |                                | Max                      | Min |
| M12 x 1.75                            | 21                    | 20.16 | 24.25                 | 22.78  | 12.3        | 11.9 | 19.2                           | 0.8                      | 0.4 |
| M14 x 2                               | 24                    | 23.16 | 27.71                 | 26.17  | 14.3        | 13.6 | 22                             | 0.8                      | 0.4 |
| M16 x 2                               | 27                    | 26.16 | 31.18                 | 29.56  | 17.1        | 16.4 | 24.9                           | 0.8                      | 0.4 |
| M20 x 2.5                             | 34                    | 33    | 39.26                 | 37.29  | 20.7        | 19.4 | 31.4                           | 0.8                      | 0.4 |
| M22 x 2.5                             | 36                    | 35    | 41.57                 | 39.55  | 23.6        | 22.3 | 33.3                           | 0.8                      | 0.4 |
| M24 x 3                               | 41                    | 40    | 47.34                 | 45.2   | 24.2        | 22.9 | 38                             | 0.8                      | 0.4 |
| M27 x 3                               | 46                    | 45    | 53.12                 | 50.85  | 27.6        | 26.3 | 42.8                           | 0.8                      | 0.4 |
| M30 x 3.5                             | 50                    | 49    | 57.74                 | 55.37  | 30.7        | 29.1 | 46.6                           | 0.8                      | 0.4 |
| M36 x 4                               | 60                    | 58.8  | 69.28                 | 66.44  | 36.6        | 35   | 55.9                           | 0.8                      | 0.4 |
| M42 x 4.5                             | 70                    | 67.9  | 80.83                 | 77.41  | 42          | 40.4 | 64.5                           | 1                        | 0.5 |
| M48 x 5                               | 80                    | 77.6  | 92.38                 | 88.46  | 48          | 46.4 | 73.7                           | 1                        | 0.5 |
| M56 x 5.5                             | 90                    | 87.2  | 103.92                | 99.41  | 56          | 54.1 | 82.8                           | 1                        | 0.5 |
| M64 x 6                               | 100                   | 96.8  | 115.47                | 110.35 | 64          | 62.1 | 92                             | 1                        | 0.5 |
| M72 x 6                               | 110                   | 106.4 | 127.02                | 121.3  | 72          | 70   | 101.1                          | 1.2                      | 0.6 |
| M80 x 6                               | 120                   | 116   | 138.56                | 132.24 | 80          | 78.1 | 110.2                          | 1.2                      | 0.6 |
| M90 x 56                              | 135                   | 130.5 | 155.88                | 148.77 | 90          | 87.8 | 124                            | 1.2                      | 0.6 |
| M100 x 6                              | 150                   | 145   | 173.21                | 165.3  | 100         | 97.8 | 137.8                          | 1.2                      | 0.6 |

This size with width across flat of 15mm is not standard. Unless specifically ordered, M10 hex jam nuts with 16 mm width across flats will be furnished

**Coating :** Electro Galvanized, Black , Hot Dip Galvanized, Cadmium Plate

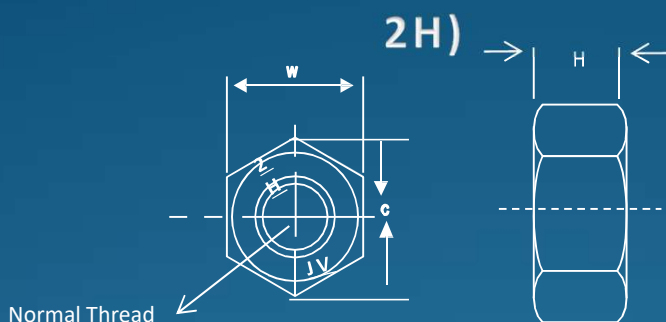
**Grade :** ASTM A563 GR 10S



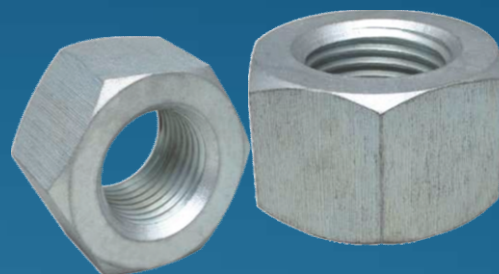


## HEAVY HEXAGON NUTS A194 GR

2H)



Normal Thread



**Dimensions inches series UNC/UNF :**

**Note :**

1. The Nut will generally confirm to ANSI / ASME B18.2.2 Heavy Hex Nuts.
2. Thread will confirm to class 2B of ANSI B1.1.
3. Heat Treatment to achieve mechanical properties of Grade 2H, 4 and 7 which confirm the requirements of ASTM A194.
4. In Bolts / Nut assembly tightening should be done by rotation of nuts. Torque values are recommended in tables for bolts.
6. All dimensions are in Inches.

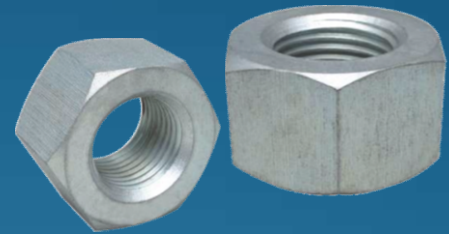
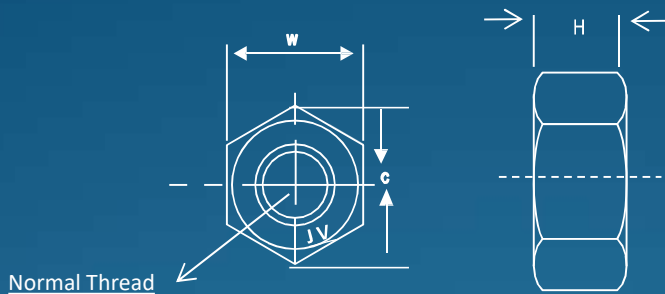
| Thread Size | PTI UNC/UN | W Max. | C Max. | H Norm. |
|-------------|------------|--------|--------|---------|
| 3/8"        | 16         | 0.656" | 0.757" | 0.375   |
| 1/2"        | 13         | 0.875" | 1.010" | 0.484   |
| 9/16"       | 12         | 0.938" | 1.083" | 0.547   |
| 5/8"        | 11         | 1.062" | 1.227" | 0.609   |
| 3/4"        | 10         | 1.150" | 1.443" | 0.734   |
| 7/8"        | 9          | 1.238" | 1.660" | 0.859   |
| 1"          | 8          | 1.625" | 1.876" | 0.984   |
| 1-1/8"      | 8          | 1.812" | 2.093" | 1.109   |
| 1-1/4"      | 8          | 2.000" | 2.309" | 1.219   |
| 1-3/8"      | 8          | 2.188" | 2.526" | 1.344   |
| 1-1/2"      | 8          | 2.375" | 2.742" | 1.469   |
| 1-5/8"      | 8          | 2.562" | 2.959" | 1.594   |
| 1-3/4"      | 8          | 2.750" | 3.175" | 1.719   |
| 1-7/8"      | 8          | 2.938" | 3.392" | 1.844   |
| 2"          | 8          | 3.125" | 3.608" | 1.969   |
| 2-1/4"      | 8          | 3.500" | 4.041" | 2.203   |
| 2-1/2"      | 8          | 3.875" | 4.474" | 2.453   |
| 2-3/4"      | 8          | 4.250" | 4.907" | 2.703   |
| 3"          | 8          | 4.625" | 5.340" | 2.953   |
| 3-1/4"      | 8          | 5.000" | 5.774" | 3.188   |
| 3-1/2"      | 8          | 5.375" | 6.207" | 3.438   |
| 3-3/4"      | 8          | 5.755" | 6.650" | 3.683   |
| 4"          | 8          | 6.142" | 7.093" | 3.930   |

**Coating :** Electro Galvanized, Black & Hot Dip Galvanized

**Grade :** 2H, 2HM, GR4, GR7 , B8, B8M



## HIGH STRENGTH HEXAGON NUTS DIN 6915



### Dimensions :

### Note :

1. The Nut will generally confirm to DIN 6915
2. Thread will confirm to class 6H of DIN 13 for Coarse Series.
3. Heat Treatment to achieve mechanical properties to property Class 10.9
4. Nuts of property Class 10 are used with bolts of property Class 10.9  
(In general nuts of a higher property class can replace nut of lower property class in a joint)
5. In Bolts/Nuts assembly tightening should be done by rotation of nuts.
6. All dimensions are in millimeters.

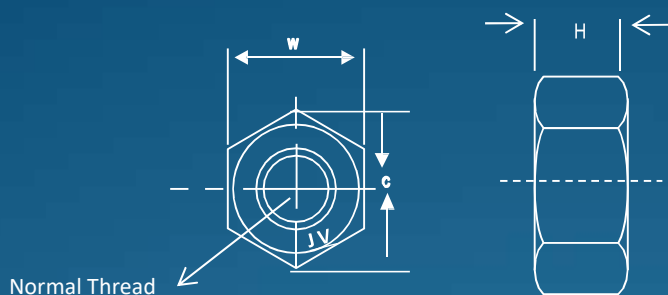
| Thread Size | TPI<br>UNC/UN | W<br>Max. | C<br>Max. | H<br>Nom. |
|-------------|---------------|-----------|-----------|-----------|
| M16         | 2.00          | 24.00     | 26.75     | 13.00     |
| M18         | 2.50          | 27.00     | 29.56     | 15.00     |
| M20         | 2.50          | 30.00     | 32.95     | 16.00     |
| M22         | 2.50          | 32.00     | 35.03     | 18.00     |
| M24         | 3.00          | 36.00     | 39.55     | 19.00     |
| M27         | 3.00          | 41.00     | 45.20     | 22.00     |
| M30         | 3.50          | 46.00     | 50.85     | 24.00     |
| M33         | 3.50          | 50.00     | 55.37     | 26.00     |
| M36         | 4.00          | 55.00     | 60.79     | 29.00     |
| M39         | 4.00          | 60.00     | 66.44     | 31.00     |
| M42         | 4.50          | 65.00     | 71.30     | 34.00     |

**Coating :** Mill Finish, Electro Galvanized & Hot Dip Galvanized

**Grade :** DIN 6915



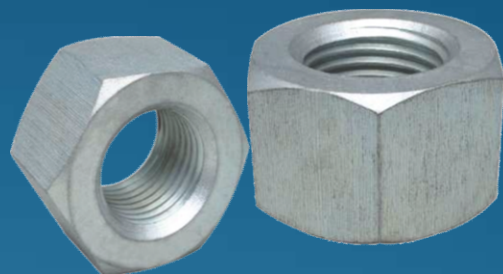
## HIGH STRENGTH HEXAGON NUTS BS 4190



### Dimensions :

### Note :

1. The Nut will generally confirm to BS 4190.
2. Thread will confirm to class 6H of BS 3643 for Coarse Series.
3. Heat Treatment to achieve mechanical properties to property Class 8 or 10.
4. Nuts of property Class 8 are used with bolts of property Class 10.9.  
(In general nuts of a higher property class can replace nut of lower property class in a joint)
6. In Bolts/Nuts assembly tightening should be done by rotation of nuts.
7. Sizes in brackets are non preferred standards.
8. All dimensions are in millimeters.



| Thread Size | TPI UNC/UN | W Max. | C Max. | H Nom. |
|-------------|------------|--------|--------|--------|
| M06         | 1.00       | 10.00  | 10.89  | 5.375  |
| M08         | 1.25       | 13.00  | 14.25  | 6.875  |
| M10         | 1.50       | 17.00  | 18.72  | 8.450  |
| M12         | 1.75       | 19.00  | 20.88  | 10.450 |
| M16         | 2.00       | 24.30  | 26.17  | 13.550 |
| M20         | 2.50       | 30.00  | 32.53  | 16.550 |
| M22         | 2.50       | 32.00  | 35.03  | 18.550 |
| M24         | 3.00       | 36.00  | 39.55  | 19.650 |
| M27         | 3.00       | 41.00  | 45.20  | 22.650 |
| M30         | 3.50       | 46.00  | 50.85  | 24.650 |
| M33         | 3.50       | 50.00  | 55.37  | 26.650 |
| M36         | 4.00       | 55.00  | 60.79  | 29.650 |
| M39         | 4.00       | 60.00  | 66.44  | 31.800 |
| M42         | 4.50       | 65.00  | 72.09  | 34.800 |

**Coating :** Mill Finish, Electro Galvanized & Hot Dip Galvanized

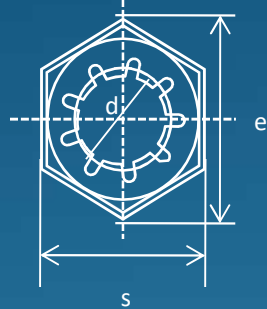
**Grade :** BS 4190



## PAL NUT DIN 7967

For metric thread Series 1  
(6 locking teeth)

For metric fine thread  
Series 2 and 3  
(9 locking teeth)



### DIN 7967 Dimensions of Self Locking Counter Nuts

| For thread size |            |            | For thread d |          |          | e m s |      |      | For thread f |          |          | u v  |      | Weight (7.85kg/dm <sup>3</sup> )<br>kg/1000 pieces |          |          |
|-----------------|------------|------------|--------------|----------|----------|-------|------|------|--------------|----------|----------|------|------|----------------------------------------------------|----------|----------|
| Series 1        | Series 2   | Series 3   | Series 1     | Series 2 | Series 3 |       |      |      | Series 1     | Series 2 | Series 3 |      |      | Series 1                                           | Series 2 | Series 3 |
| M4              | .          | .          | 3.5          | .        | .        | 8.1   | 2.5  | 7.0  | 0.3          | .        | .        | 2.5  | 5.7  | 0.17                                               | .        | .        |
| M5              | .          | .          | 4.5          | .        | .        | 9.2   | 2.5  | 8.0  | 0.4          | .        | .        | 2.5  | 6.5  | 0.28                                               | .        | .        |
| M6              | .          | .          | 5.3          | .        | .        | 11.5  | 3.0  | 10.0 | 0.4          | .        | .        | 3.0  | 8.0  | 0.40                                               | .        | .        |
| M8              | M8 x 1     | .          | 6.9          | 7.1      | .        | 15.0  | 3.5  | 13.0 | 0.5          | 0.4      | .        | 3.5  | 10.0 | 0.90                                               | 0.70     | .        |
| M10             | M10 x 1.25 | M10 x 1    | 8.6          | 9.0      | 9.3      | 19.6  | 4.0  | 17.0 | 0.5          | 0.5      | 0.5      | 4.0  | 12.0 | 1.40                                               | 1.40     | 1.40     |
| M12             | M12 x 1.5  | M12 x 1.25 | 10.4         | 10.7     | 11.0     | 21.9  | 4.5  | 19.0 | 0.6          | 0.3      | 0.6      | 4.5  | 14.5 | 1.90                                               | 1.90     | 1.90     |
| M14             | M14 x 1.5  | .          | 12.0         | 12.70    | .        | 25.4  | 5.0  | 22.0 | 0.6          | 0.6      | .        | 5.0  | 16.0 | 2.50                                               | 2.50     | .        |
| M16             | M16 x 1.5  | .          | 14.1         | 14.8     | .        | 27.7  | 5.0  | 24.0 | 0.7          | 0.7      | .        | 5.0  | 18.0 | 3.40                                               | 3.40     | .        |
| M18             | M18 x 2    | M18 x 1.5  | 15.5         | 16.2     | 16.8     | 31.2  | 5.5  | 27.0 | 0.7          | 0.7      | 0.7      | 5.5  | 20.5 | 4.10                                               | 4.10     | 4.10     |
| M20             | M20 x 2    | M20 x 1.5  | 17.6         | 18.3     | 18.8     | 34.6  | 6.0  | 30.0 | 0.8          | 0.8      | 0.7      | 6.0  | 22.0 | 5.80                                               | 5.80     | 5.10     |
| M22             | M22 x 2    | M22 x 1.5  | 19.6         | 20.3     | 20.8     | 36.9  | 6.0  | 32.0 | 0.8          | 0.8      | 0.7      | 6.0  | 24.0 | 6.40                                               | 6.40     | 5.60     |
| M24             | M24 x 2    | M24 x 1.5  | 21.0         | 22.5     | 22.8     | 41.6  | 7.0  | 36.0 | 0.9          | 0.9      | 0.7      | 7.0  | 26.0 | 9.50                                               | 9.50     | 7.40     |
| M27             | M27 x 2    | .          | 24.2         | 25.5     | .        | 47.3  | 7.0  | 41.0 | 1.0          | 1.0      | .        | 7.0  | 29.0 | 13.00                                              | 13.00    | .        |
| M30             | M30 x 2    | .          | 26.6         | 28.5     | .        | 53.1  | 8.0  | 46.0 | 1.1          | 1.0      | .        | 8.0  | 32.0 | 17.50                                              | 16.00    | .        |
| M33             | M33 x 2    | .          | 29.8         | 31.5     | .        | 57.7  | 8.0  | 50.0 | 1.2          | 1.0      | .        | 8.0  | 34.0 | 22.00                                              | 18.50    | .        |
| M36             | M36 x 3    | .          | 32.2         | 33.6     | .        | 63.5  | 9.0  | 55.0 | 1.3          | 1.3      | .        | 9.0  | 38.0 | 29.00                                              | 29.00    | .        |
| M39             | M39 x 3    | .          | 35.2         | 36.6     | .        | 69.3  | 9.0  | 60.0 | 1.3          | 1.3      | .        | 9.0  | 40.0 | 32.00                                              | 32.00    | .        |
| M42             | M42 x 3    | .          | 37.6         | 39.8     | .        | 75.0  | 11.0 | 65.0 | 1.4          | 1.4      | .        | 11.0 | 45.0 | 45.00                                              | 45.00    | .        |
| M45             | M45 x 3    | .          | 40.9         | 42.8     | .        | 80.8  | 12.0 | 70.0 | 1.5          | 1.5      | .        | 12.0 | 48.0 | 64.00                                              | 64.00    | .        |
| M48             | M48 x 3    | .          | 43.9         | 45.8     | .        | 86.5  | 14.0 | 75.0 | 1.6          | 1.5      | .        | 14.0 | 52.0 | 80.00                                              | 75.00    | .        |
| M52             | M52 x 3    | .          | 48.2         | 49.8     | .        | 92.4  | 16.0 | 80.0 | 1.7          | 1.5      | .        | 16.0 | 58.0 | 95.00                                              | 80.00    | .        |

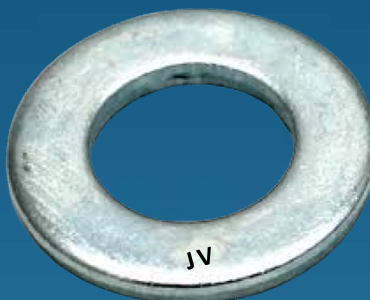
Coating : Electro Galvanized & Hot Dip Galvanized

Grade : DIN 7969





## FLAT WASHER DIN 125A / DIN 126A



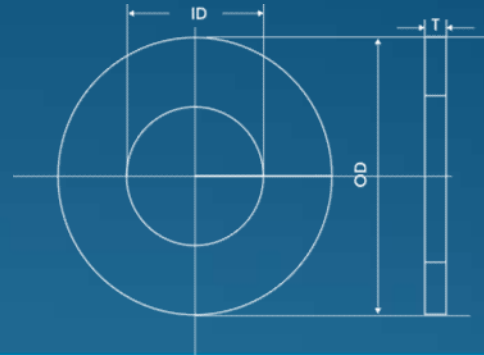
| MM   | Internal Dia | External Dia | Thickness |
|------|--------------|--------------|-----------|
| M 06 | 6.6          | 12.5         | 1.60      |
| M 08 | 8.6          | 16           | 1.60      |
| M 10 | 11           | 21           | 2.00      |
| M 12 | 14           | 24           | 2.50      |
| M 14 | 16           | 28           | 2.50      |
| M 16 | 18           | 30           | 3.15      |
| M 18 | 20           | 34           | 3.15      |
| M 20 | 22           | 37           | 3.15      |
| M 22 | 24           | 39           | 3.15      |
| M 24 | 26           | 44           | 4.00      |
| M 27 | 30           | 50           | 4.00      |
| M 30 | 33           | 56           | 4.00      |
| M 33 | 36           | 60           | 5.00      |
| M 36 | 39           | 66           | 5.00      |
| M 39 | 42           | 72           | 6.00      |
| M 42 | 45           | 78           | 6.00      |
| M 45 | 48           | 85           | 8.00      |
| M 48 | 52           | 92           | 8.00      |
| M 52 | 56           | 100          | 8.00      |
| M 56 | 60           | 108          | 8.00      |
| M 60 | 64           | 116          | 8.00      |
| M 64 | 68           | 124          | 8.00      |

**Coating** : Black, Electro Galvanized , Cadmium Plated & Hot Dip Galvanized

**Grade** : ASTM A36, C45, CRC, SS304, SS316, Brass, Copper, Silicon Bronze



## FLAT WASHER ASTM F436M



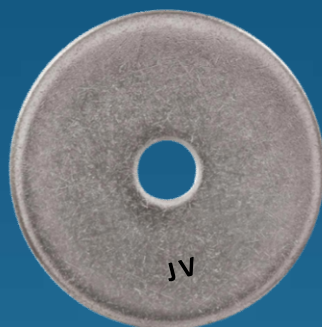
| MM  | Internal Dia | External Dia | Thickness |
|-----|--------------|--------------|-----------|
| 10  | 11.25        | 14.6         | 1.25      |
| 12  | 13.50        | 17.5         | 1.50      |
| 16  | 17.50        | 24.0         | 3.00      |
| 20  | 20.60        | 38.0         | 3.00      |
| 22  | 26.50        | 45.0         | 3.50      |
| 24  | 28.50        | 50.0         | 3.50      |
| 27  | 30.00        | 60.0         | 3.50      |
| 30  | 32.50        | 62.0         | 3.50      |
| 33  | 34.50        | 68.0         | 4.00      |
| 36  | 38.00        | 74.0         | 4.50      |
| 39  | 42.00        | 76.0         | 4.50      |
| 42  | 45.60        | 84.0         | 4.50      |
| 45  | 48.60        | 92.0         | 4.50      |
| 48  | 52.70        | 95.0         | 4.50      |
| 52  | 58.70        | 104.0        | 6.10      |
| 56  | 62.70        | 107.0        | 6.10      |
| 60  | 66.60        | 114.0        | 6.10      |
| 64  | 70.70        | 118.0        | 6.10      |
| 72  | 78.70        | 130.0        | 6.10      |
| 76  | 82.80        | 137.0        | 6.10      |
| 80  | 86.90        | 142.0        | 6.10      |
| 90  | 96.90        | 159.0        | 6.10      |
| 100 | 107.90       | 176.0        | 6.10      |

**Coating** : Black, Electro Galvanized , Hot Dip Galvanized, Ceramic Fluoropolymer Coated.

**Grade** : SAE1045, Hardened.



## FENDER WASHER



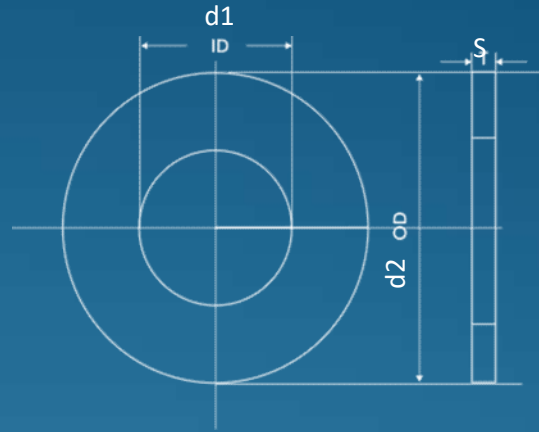
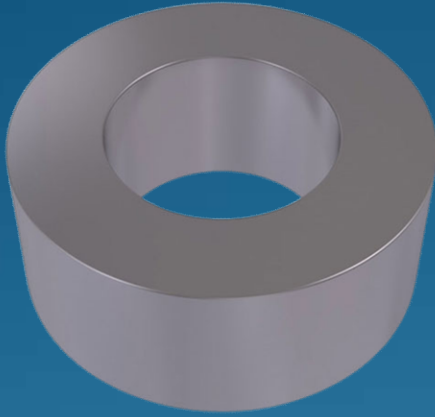
| MM | Internal Dia | External Dia | Thickness |
|----|--------------|--------------|-----------|
| 04 | 4.3          | 12           | 1.00      |
| 05 | 5.3          | 15           | 1.20      |
| 06 | 6.4          | 18           | 1.60      |
| 08 | 8.4          | 24           | 2.00      |
| 10 | 10.5         | 30           | 2.50      |
| 12 | 13           | 37           | 3.00      |
| 14 | 15           | 44           | 3.00      |
| 16 | 17           | 50           | 3.00      |
| 20 | 21           | 60           | 3.50      |
| 22 | 23.5         | 68           | 3.50      |
| 24 | 25.5         | 72           | 3.50      |

**Coating** : Black, Electro Galvanized , Cadmium Plated & Hot Dip Galvanized

**Grade** : ASTM A36, C45, CRC,SS304, SS316, Brass, Copper, Silicon Bronze



## FLAT WASHER DIN 7989



| For Thread<br>Thread | d1<br>Min | d1<br>Max | d2<br>Min | d2<br>Max | S+1 | Wt Kg<br>1000 Pcs |
|----------------------|-----------|-----------|-----------|-----------|-----|-------------------|
| M10                  | 11.00     | 11.43     | 19.16     | 20.00     | 8   | 13.800            |
| M12                  | 13.50     | 13.93     | 23.16     | 24.00     | 8   | 19.400            |
| M16                  | 17.50     | 17.93     | 29.16     | 30.00     | 8   | 29.300            |
| M20                  | 22.00     | 22.52     | 36.00     | 37.00     | 8   | 42.700            |
| M24                  | 26.00     | 26.52     | 43.00     | 44.00     | 8   | 62.100            |
| M27                  | 30.00     | 30.52     | 49.00     | 50.00     | 8   | 78.900            |
| M30                  | 33.00     | 33.62     | 54.80     | 56.00     | 8   | 101.000           |
| M33                  | 36.00     | 36.62     | 60.80     | 62.00     | 8   | 154.000           |

**Coating** : Electro Galvanized & Hot Dip Galvanized

**Grade** : DIN 7989





## NORD LOCK WASHER

Nord-Lock wedge-locking washers utilise tension instead of friction in order to secure bolted joints exposed to severe vibration and dynamic loads.

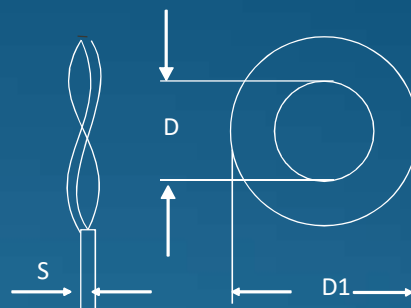
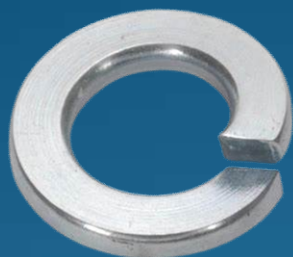
Over the operational life cycle, Nord-Lock washers offer increased operational reliability and lower maintenance costs, while significantly reducing the risks of production stops, accidents and warranty claims.



| d    | D    | T    | d        | D        | T      | Bolt size<br>(Metric) | Bolt size (UNC) | Weight/100<br>pairs<br>(kg) |
|------|------|------|----------|----------|--------|-----------------------|-----------------|-----------------------------|
| (mm) | (mm) | (mm) | (inch)   | (inch)   | (inch) |                       |                 |                             |
| 3.4  | 7    | 2.2  | 1/8"     | 1/4"     | 1/16"  | M3                    | #5              | 0.04                        |
| 3.9  | 7.6  | 2.2  | 1/8"     | 5/16"    | 1/16"  | M3,5                  | #6              | 0.04                        |
| 3.9  | 9    | 2.2  | 1/8"     | 3/8"     | 1/16"  | M3,5                  | #6              | 0.07                        |
| 4.4  | 7.6  | 2.2  | 3/16"    | 5/16"    | 1/16"  | M4                    | #8              | 0.04                        |
| 4.4  | 9    | 2.2  | 3/16"    | 3/8"     | 1/16"  | M4                    | #8              | 0.07                        |
| 5.4  | 9    | 2.2  | 3/16"    | 3/8"     | 1/16"  | M5                    | #10             | 0.06                        |
| 5.4  | 10.8 | 2.2  | 3/16"    | 7/16"    | 1/16"  | M5                    | #10             | 0.11                        |
| 6.5  | 10.8 | 2.2  | 1/4"     | 7/16"    | 1/16"  | M6                    |                 | 0.09                        |
| 6.5  | 13.5 | 2    | 1/4"     | 1/2"     | 1/16"  | M6                    |                 | 0.16                        |
| 7.2  | 11.5 | 2.2  | 1/4"     | 7/16"    | 1/16"  |                       | 1/4"            | 0.09                        |
| 7.2  | 13.5 | 2.2  | 1/4"     | 1/2"     | 1/16"  |                       | 1/4"            | 0.15                        |
| 8.7  | 13.5 | 2    | 5/16"    | 1/2"     | 1/16"  | M8                    | 5/16"           | 0.12                        |
| 8.7  | 16.6 | 2.15 | 5/16"    | 5/8"     | 1/16"  | M8                    | 5/16"           | 0.23                        |
| 10.3 | 16.6 | 2    | 7/16"    | 5/8"     | 1/16"  |                       | 3/8"            | 0.19                        |
| 10.3 | 21   | 2    | 7/16"    | 13/16"   | 1/16"  |                       | 3/8"            | 0.38                        |
| 10.7 | 16.6 | 2    | 7/16"    | 5/8"     | 1/16"  | M10                   |                 | 0.18                        |
| 10.7 | 21   | 2    | 7/16"    | 13/16"   | 1/16"  | M10                   |                 | 0.37                        |
| 11.4 | 18.5 | 2.2  | 7/16"    | 3/4"     | 1/16"  | M11                   | 7/16"           | 0.26                        |
| 13   | 19.5 | 2    | 1/2"     | 3/4"     | 1/16"  | M12                   |                 | 0.23                        |
| 13   | 25.4 | 3    | 1/2"     | 1"       | 1/8"   | M12                   |                 | 0.82                        |
| 13.5 | 19.5 | 2    | 1/2"     | 3/4"     | 1/16"  |                       | 1/2"            | 0.22                        |
| 13.5 | 25.4 | 3.2  | 1/2"     | 1"       | 1/8"   |                       | 1/2"            | 0.8                         |
| 15.2 | 23   | 3    | 5/8"     | 15/16"   | 1/8"   | M14                   | 9/16"           | 0.49                        |
| 15.2 | 30.7 | 3.2  | 5/8"     | 1 3/16"  | 1/8"   | M14                   | 9/16"           | 1.31                        |
| 17   | 25.4 | 3    | 11/16"   | 1"       | 1/8"   | M16                   | 5/8"            | 0.59                        |
| 17   | 30.7 | 3.2  | 11/16"   | 1 3/16"  | 1/8"   | M16                   | 5/8"            | 1.13                        |
| 19.5 | 29   | 3.2  | 3/4"     | 1 1/8"   | 1/8"   | M18                   |                 | 0.8                         |
| 19.5 | 34.5 | 3.2  | 3/4"     | 1 3/8"   | 1/8"   | M18                   |                 | 1.56                        |
| 20   | 30.7 | 3.2  | 13/16"   | 1 3/16"  | 1/8"   |                       | 3/4"            | 0.96                        |
| 20   | 39   | 3.2  | 13/16"   | 1 9/16"  | 1/8"   |                       | 3/4"            | 2.1                         |
| 21.4 | 30.7 | 3    | 13/16"   | 1 3/16"  | 1/8"   | M20                   |                 | 0.82                        |
| 21.4 | 39   | 3.2  | 13/16"   | 1 9/16"  | 1/8"   | M20                   |                 | 2.06                        |
| 23.4 | 34.5 | 3.2  | 15/16"   | 1 3/8"   | 1/8"   | M22                   | 7/8"            | 1.23                        |
| 23.4 | 42   | 3.2  | 15/16"   | 1 5/8"   | 1/8"   | M22                   | 7/8"            | 2.23                        |
| 25.3 | 39   | 3.2  | 1"       | 1 9/16"  | 1/8"   | M24                   |                 | 1.59                        |
| 25.3 | 48.5 | 4.5  | 1"       | 1 15/16" | 1/8"   | M24                   |                 | 4.47                        |
| 27.9 | 39   | 3.2  | 1 1/8"   | 1 9/16"  | 1/8"   |                       | 1"              | 1.42                        |
| 27.9 | 48.5 | 3.2  | 1 1/8"   | 1 15/16" | 1/8"   |                       | 1"              | 2.79                        |
| 28.4 | 42   | 6.8  | 1 1/8"   | 1 5/8"   | 1/4"   | M27                   |                 | 3.45                        |
| 28.4 | 48.5 | 6.8  | 1 1/8"   | 1 15/16" | 1/4"   | M27                   |                 | 5.34                        |
| 31.4 | 47   | 6.8  | 1 1/4"   | 1 7/8"   | 1/4"   | M30                   | 1 1/8"          | 4.49                        |
| 31.4 | 58.5 | 6.8  | 1 1/4"   | 2 5/16"  | 1/4"   | M30                   | 1 1/8"          | 9.18                        |
| 34.4 | 48.5 | 6.8  | 1 3/8"   | 1 15/16" | 1/4"   | M33                   | 1 1/4"          | 4.28                        |
| 37.4 | 55   | 6.8  | 1 1/2"   | 2 3/16"  | 1/4"   | M36                   | 1 3/8"          | 5.96                        |
| 40.4 | 58.5 | 6.8  | 1 9/16"  | 2 5/16"  | 1/4"   | M39                   | 1 1/2"          | 6.74                        |
| 43.2 | 63   | 6.8  | 1 11/16" | 2 1/2"   | 1/4"   | M42                   |                 | 7.5                         |
| 46.2 | 70   | 6.8  | 1 13/16" | 2 3/4"   | 1/4"   | M45                   | 1 3/4"          | 10.2                        |
| 49.6 | 75   | 6.8  | 1 15/16" | 2 15/16" | 1/4"   | M48                   |                 | 12                          |
| 53.6 | 80   | 9    | 2 1/8"   | 3 1/8"   | 3/8"   | M52                   | 2"              | 18.04                       |
| 59.1 | 85   | 9    | 2 5/16"  | 3 3/8"   | 3/8"   | M56                   | 2 1/4"          | 21.3                        |
| 63.1 | 90   | 9    | 2 1/2"   | 3 9/16"  | 3/8"   | M60                   |                 | 23.5                        |
| 67.1 | 95   | 9    | 2 5/8"   | 3 3/4"   | 3/8"   | M64                   | 2 1/2"          | 25.8                        |
| 71.1 | 100  | 9    | 2 13/16" | 3 15/16" | 3/8"   | M68                   |                 | 28.2                        |
| 75.1 | 105  | 9    | 2 15/16" | 4 1/8"   | 3/8"   | M72                   |                 | 30.7                        |
| 79.1 | 110  | 9    | 3 1/8"   | 4 5/16"  | 3/8"   | M76                   | 3"              | 33.3                        |
| 83.1 | 115  | 9    | 3 1/4"   | 4 1/2"   | 3/8"   | M80                   |                 | 36                          |



## HELICAL SPRING WASHER / LOCK WASHER DIN 127



| MM | Internal<br>Dia D | External<br>Dia D1 | Thickness |
|----|-------------------|--------------------|-----------|
| 06 | 6.5               | 9.00               | 1.00      |
| 08 | 8.5               | 12.00              | 1.25      |
| 10 | 10.5              | 15.00              | 1.50      |
| 12 | 13.50             | 17.50              | 1.50      |
| 16 | 17.50             | 24.00              | 3.00      |
| 20 | 20.60             | 38.00              | 3.00      |
| 22 | 23.50             | 45.00              | 3.50      |
| 24 | 28.50             | 50.00              | 3.50      |
| 27 | 30.00             | 60.00              | 3.50      |
| 30 | 32.50             | 62.00              | 3.50      |
| 33 | 34.50             | 68.00              | 4.00      |
| 36 | 38.00             | 74.00              | 4.50      |
| 39 | 42.00             | 76.00              | 4.50      |

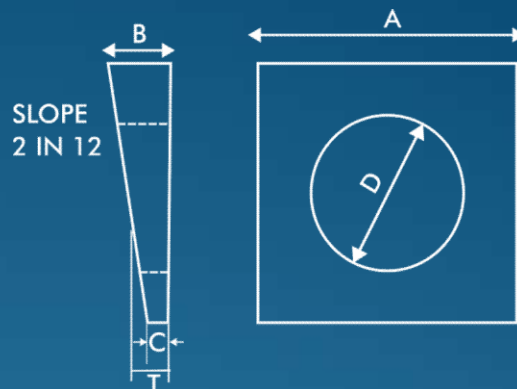
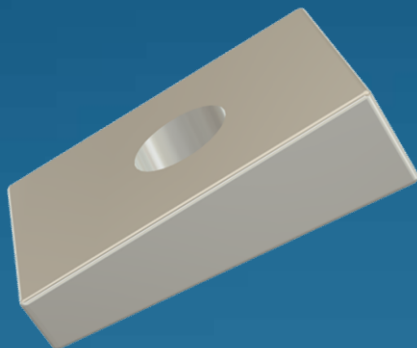
**Coating** : Black, Electro Galvanized & Hot Dip Galvanized

**Grade** : A36, SAE1045 Hardened, C45, SS304, SS316, Brass, Copper, Silicon Bronze



## BEVELLED WASHERS

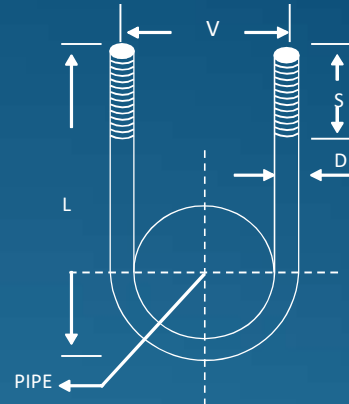
Hardened Bevelled washers are covered under the ASTM specification F436. They are intended for American Standard beams and channels in structural applications, to compensate for lack of parallelism. For Bevelled washers to be used with low carbon steel bolts



| Bolt Size | A                   | B         | C    | T    | D        | Weight (lbs.)<br>Per 100<br>Pieces |
|-----------|---------------------|-----------|------|------|----------|------------------------------------|
|           | Square<br>Dimension | Thickness |      |      | Diameter |                                    |
| 1/2       | 1.75                | 0.45      | 0.16 | 0.31 | 0.53     | 24.6                               |
| 5/8       | 1.75                | 0.45      | 0.16 | 0.31 | 0.69     | 23.3                               |
| 3/4       | 1.75                | 0.45      | 0.16 | 0.31 | 0.81     | 22                                 |
| 7/8       | 1.75                | 0.45      | 0.16 | 0.31 | 0.94     | 20.4                               |
| 1         | 1.75                | 0.45      | 0.16 | 0.31 | 1.12     | 17.9                               |
| 1 1/8     | 2.25                | 0.5       | 0.12 | 0.31 | 1.25     | 33.8                               |
| 1 1/4     | 2.25                | 0.5       | 0.12 | 0.31 | 1.38     | 31.4                               |
| 1 3/8     | 2.25                | 0.5       | 0.12 | 0.31 | 1.5      | 29.1                               |
| 1 1/2     | 2.25                | 0.5       | 0.12 | 0.31 | 1.62     | 26.5                               |



## U BOLT TYPE-A



| Size   | D   | V   | L   | S  |
|--------|-----|-----|-----|----|
| 1/2"   | M08 | 32  | 55  | 30 |
| 3/4"   | M08 | 38  | 60  | 32 |
| 1"     | M08 | 44  | 75  | 40 |
| 1-1/4" | M10 | 55  | 85  | 45 |
| 1-1/2" | M10 | 61  | 95  | 45 |
| 2"     | M13 | 78  | 105 | 50 |
| 2-1/2" | M13 | 92  | 118 | 50 |
| 3"     | M13 | 104 | 130 | 50 |
| 4"     | M13 | 130 | 160 | 50 |
| 6"     | M16 | 187 | 215 | 60 |
| 8"     | M16 | 236 | 265 | 60 |
| 10"    | M16 | 292 | 315 | 60 |
| 12"    | M18 | 345 | 370 | 60 |
| 14"    | M18 | 377 | 410 | 70 |
| 16"    | M22 | 430 | 465 | 80 |
| 18"    | M22 | 484 | 515 | 90 |
| 20"    | M25 | 535 | 570 | 90 |
| 22"    | M25 | 595 | 635 | 90 |
| 24"    | M25 | 637 | 670 | 90 |

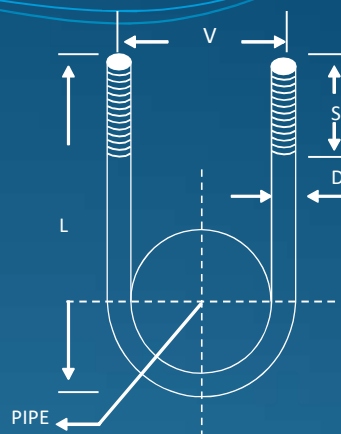
**Coating** : Electro Galvanized , Cadmium Plated , Hot Dip & PVC Coated

**Grade** : ASTM A36, A307 , B7, 8.8 , S304, SS316.





## U BOLT TYPE-B PVC COATED



| Dia    | Bolt Size D | B   | C   | A   | E   |
|--------|-------------|-----|-----|-----|-----|
| 1/2"   | M6/M8       | 24  | 30  | 70  | 54  |
| 3/4"   | M6/M8       | 29  | 35  | 70  | 54  |
| 1"     | M6/M8       | 35  | 41  | 70  | 54  |
| 1-1/4" | M8/M10      | 43  | 53  | 74  | 54  |
| 1-1/2" | M8/M10      | 51  | 61  | 77  | 64  |
| 2"     | M8/M10      | 62  | 72  | 83  | 64  |
| 2-1/2" | M12         | 75  | 87  | 96  | 77  |
| 3"     | M12         | 91  | 103 | 102 | 77  |
| 3-1/2" | M12         | 104 | 116 | 108 | 77  |
| 4"     | M12         | 116 | 128 | 115 | 77  |
| 5"     | M12         | 143 | 155 | 127 | 77  |
| 6"     | M16         | 172 | 188 | 156 | 96  |
| 8"     | M16         | 223 | 239 | 181 | 96  |
| 10"    | M20         | 277 | 297 | 213 | 102 |
| 12"    | M24         | 328 | 352 | 245 | 108 |
| 14"    | M24         | 359 | 383 | 261 | 108 |
| 16"    | M24         | 410 | 434 | 286 | 108 |
| 18"    | M24         | 461 | 485 | 321 | 121 |
| 20"    | M24         | 512 | 536 | 347 | 121 |
| 24"    | M24         | 613 | 637 | 397 | 121 |
| 30"    | M24         | 766 | 790 | 474 | 121 |
| 36"    | M24         | 919 | 943 | 550 | 121 |

**Coating** : Electro Galvanized , Cadmium Plated , Hot Dip & PVC Coated

**Grade** : ASTM A36, A307, B7, 8.8, S304, SS316.



## PIPE SUPPORT CLAMP WITH AND WITHOUT RUBBER

### COMBINATION NUT WELD M8 & M10

Thickness : Dia < 100mm – 2mm

Width : 20mm

M6 Safety Screw



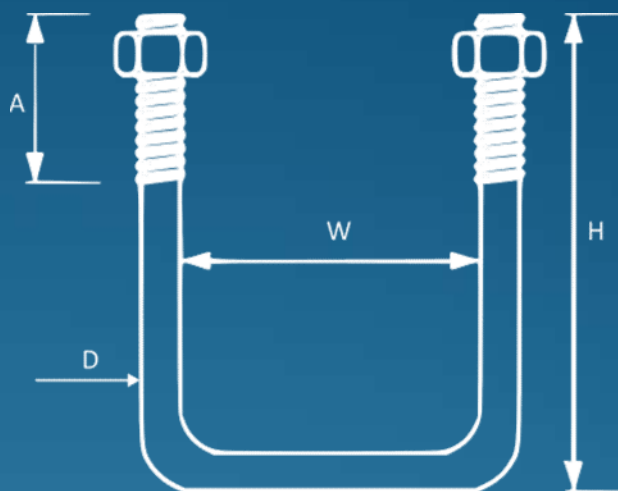
| Size   | Breaking Load | Maximum Load | Span Range |
|--------|---------------|--------------|------------|
|        | KG            | 200KG        | 17-20      |
| 1/2"   | 600 KG        | 200KG        | 21-24      |
| 3/4"   | 600 KG        | 200KG        | 25-28      |
| 1"     | 600 KG        | 200KG        | 32-35      |
| 1-1/4" | 600 KG        | 200KG        | 42-45      |
| 1-1/2" | 600 KG        | 200KG        | 48-51      |
| 2"     | 600 KG        | 200KG        | 58-63      |
| 2-1/2" | 600 KG        | 200KG        | 62-78      |
| 3"     | 600 KG        | 200KG        | 84-89      |
| 3-1/2" | 600 KG        | 200KG        | 96-102     |
| 4"     | 600 KG        | 200KG        | 109-114    |
| 4-1/2" | 600 KG        | 200KG        | 121-127    |
| 5"     | 600 KG        | 200KG        | 133-140    |
| 6"     | 600 KG        | 200KG        | 159-168    |
| 8"     | 600 KG        | 200KG        | 207-219    |
| 10"    | 600 KG        | 200KG        | 265-276    |
| 12"    | 600 KG        | 200KG        | 315-330    |
| 16"    | 600 KG        | 200KG        | 419-435    |

**Coating** : Electro Galvanized , Hot Dip & PVC Coated

**Grade** : ASTM A36, S304, SS316.



## SQUARE U BOLT



### Technical Data & Availability

| Size      | A (mm) | W     | H   |
|-----------|--------|-------|-----|
| M6X020X45 | 25     | 20-21 | 45  |
| M6X25X50  | 30     | 25-26 | 50  |
| M6X30X70  | 30     | 30-31 | 70  |
| M6X35X75  | 40     | 35-36 | 75  |
| M6X40X80  | 40     | 40-41 | 80  |
| M6X45X85  | 40     | 45-46 | 85  |
| M6X50X100 | 50     | 50-51 | 100 |
| M8X40X65  | 45     | 40-41 | 65  |
| M8X45X110 | 60     | 45-46 | 110 |
| M8X50X100 | 50     | 50-51 | 100 |
| M8X55X85  | 35     | 55-56 | 85  |
| M8X60X120 | 60     | 60-61 | 120 |

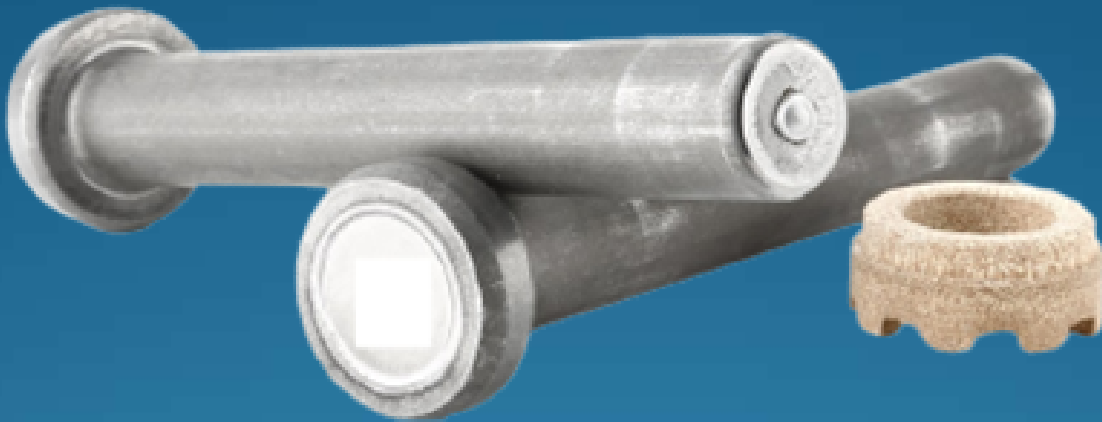
Coating : Electro Galvanized , Hot Dip & PVC Coated

Grade : ASTM A36, S304, SS316.



## SHEAR STUD

According EN 10025-2  
Steel Number 1.0116 Grade S235J2G3



### STANDARD SHEAR STUD

|    |               |                   |
|----|---------------|-------------------|
| 01 | 13mm Diameter | 50mm-200mm length |
| 02 | 16mm Diameter | 50mm-200mm length |
| 03 | 19mm Diameter | 50mm-450mm length |
| 04 | 22mm Diameter | 50mm-450mm length |
| 05 | 25mm Diameter | 50mm-450mm length |

Coating : SELF COLOUR / MILL FINISH

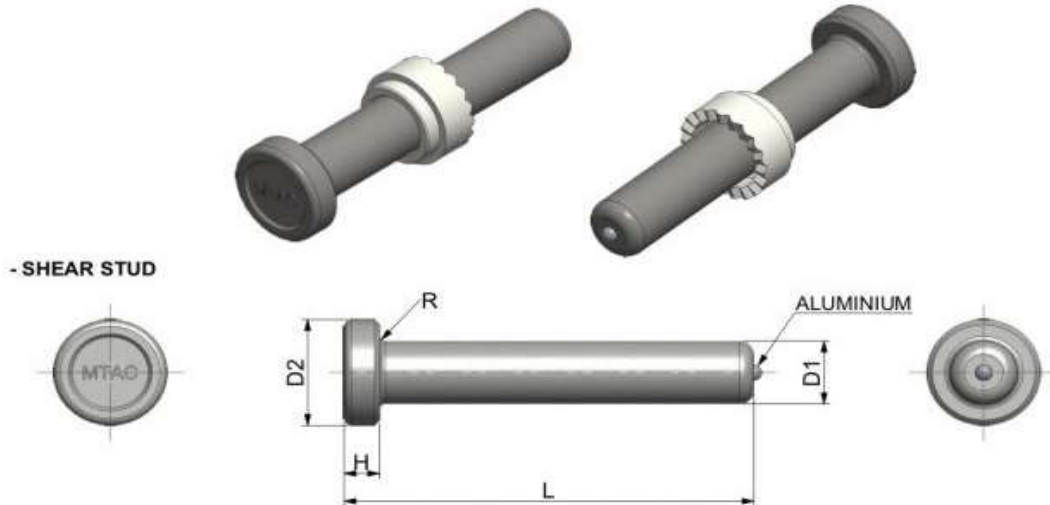
Grade : Grade S235J2G3





## SHEAR STUD

According EN 10025-2  
Steel Number 1.0116 Grade S235J2G3



### DIMENSIONS OF SHEAR CONNECTORS

Unit : mm.

|                                                      |                |    |                |    |                |                  |                |                  |      |
|------------------------------------------------------|----------------|----|----------------|----|----------------|------------------|----------------|------------------|------|
| D1 $\pm 0.4$                                         | 9.5            | 10 | 12.7           | 13 | 16             | 19               | 22             | 25               | 25.4 |
| D2 $\pm 0.3$                                         | 19             |    | 25             |    | 32             | 32               | 35             | 41               |      |
| H $\begin{smallmatrix} +1 \\ -0.5 \end{smallmatrix}$ | 7              |    | 8              |    | 8              | 10               | 10             | 12               |      |
| L $\pm 1.5$                                          | $L^{b,c}_{+3}$ |    | $L^{b,c}_{+3}$ |    | $L^{b,c}_{+4}$ | $L^{b,c}_{+4.5}$ | $L^{b,c}_{+5}$ | $L^{b,c}_{+5.5}$ |      |
| R $\pm 1$                                            | 1.5            |    | 1.5            |    | 2.5            | 2.5              | 3.0            | 3.0              |      |

b TOLERANCE ON L IS  $\pm 1.5$  mm.

c FOR SPECIAL CONDITIONS, E.G. THROUGH-DECK WELDING, THE DIMENSIONS AND THE TOLERANCES ARE NOT APPLICABLE.

### - CERAMIC FERRILE



### STANDARD FERRILES

THESE STANDARD CERAMIC FERRILES ARE ACCORDING ISO 13918:2008 TYPE UF, FOR SHEAR CONNECTOR WELDED TO STEEL MEMBER IN POSITION

Unit : mm.

| SPECIFICATION | DIMENSION                                             |            |            |         |
|---------------|-------------------------------------------------------|------------|------------|---------|
|               | D1 $\begin{smallmatrix} +0.5 \\ -0 \end{smallmatrix}$ | D2 $\pm 1$ | D3 $\pm 1$ | H $\pm$ |
| UF 10         | 10.2                                                  | 15         | 17.8       | 10      |
| UF 13         | 13.1                                                  | 20         | 22.2       | 11      |
| UF 16         | 16.3                                                  | 26         | 30         | 13      |
| UF 19         | 19.4                                                  | 26         | 30.8       | 16.7    |
| UF 22         | 22.8                                                  | 30.7       | 38.5       | 18.5    |
| UF 25         | 26                                                    | 35.5       | 41         | 21      |

Coating : SELF COLOUR / MILL FINISH

Grade : Grade S235J2G3



## SLEEVE ANCHORS



### How Sleeve Anchors Work

Considered by many in the construction trade and other industries to be one of the most versatile masonry expansion anchors available, sleeve anchors can be used in a variety of base materials, including block, brick, and concrete. Sleeve anchors come in a wide variety of diameters, lengths and head styles, which makes them an excellent fastener solution for light or heavy-duty fastening jobs. They are also pre-assembled and ready for immediate installation.

The anchor sleeve is constructed of high-quality steel components. Each part has zinc plating and comes pre-assembled in a ready-to-use anchor. The anchor consists of a threaded stud that has an outwardly flared, cone-shaped end. The tubular expander sleeve is assembled over the stud and pushed against the tiny diameter of the cone. The washer and hex nut assembled on the stud complete the anchor, which functions based on a true expansion principle: By tightening the nut, it pulls the cone-shaped stud end into the expander sleeve. This process wedges the anchor and locks it into the base material.

### Sleeve Anchors Dimensions

Sleeve anchors are available in stainless steel for outdoor and wet environments. The fastener has four different head styles: Acorn, hex, round or flat countersunk. They're also available in the following dimensions:

- 1/4", 3/8", 1/2", 5/8", 3/4", 7/8",

### Hole Preparation

You will need a hammer drill to install a sleeve anchor. The hammer motion of the drill breaks up the base material, and the rotation of the tool pulls the material out of the hole to create an opening that meets the tolerance required for the anchor. If a standard straight-rotation drill is used, the hole created by the tool will not be appropriate to ensure proper installation of the anchor.

Make sure you set the hammer drill in the hammer and rotation mode and, using a carbide tip bit that meets ANSI Standards, create a hole with the appropriate tolerance. The hole must have the same dimensions as the sleeve anchor you install. For example, a 1" anchor requires you to drill a 1" hole.

Make the depth of the hole in the base material at least ½ inch deeper than the anchor will penetrate. In addition, each diameter of anchor requires a minimum embedment depth to ensure minimum holding values. The hole must also be cleaned of any debris left over from the drilling process. Use a wire brush, compressed air or a vacuum to remove this debris.

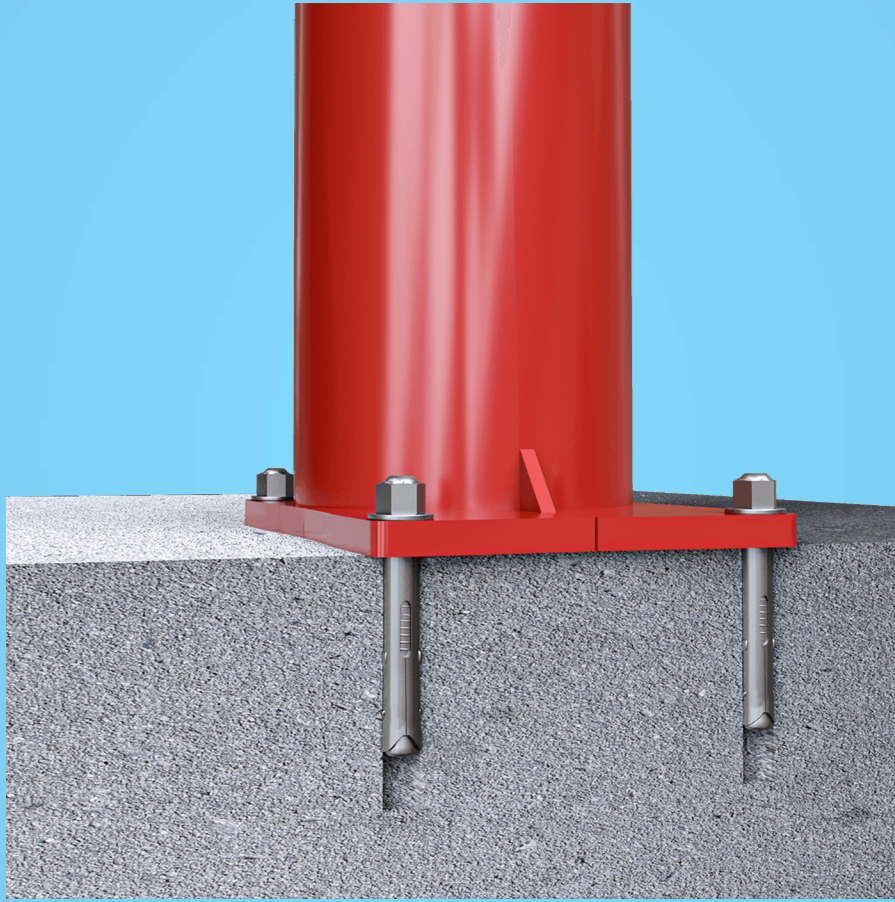
#### Installing a Sleeve Anchor.

Insert the sleeve anchor into the fixture and into the hole in the base material. Make sure the washer is flush with the material being fastened. Use your hammer to deliver several light taps to seat the anchor in the hole properly.

Then, use a wrench to turn the nut or head 2-3 turns, which pulls the working end of the sleeve anchor up through the sleeve, expanding the anchor and securing it in the base material.



## SLEEVE ANCHORS

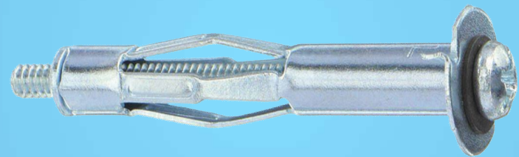
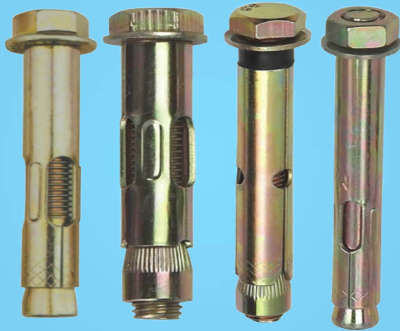


| SIZE           | DRILL SIZE | LBS PER HUNDRED | CASE QUANTITY |
|----------------|------------|-----------------|---------------|
| 1/4" x 1-3/8"  | 1/4"       | 2.2             | 2,000         |
| 5/16" x 1-1/2" | 5/16"      | 3.6             | 1,500         |
| 5/16" x 2-1/2" | 5/16"      | 5.4             | 1,000         |
| 3/8" x 1-7/8"  | 3/8"       | 6.1             | 800           |
| 3/8" x 3"      | 3/8"       | 9               | 600           |
| 3/8" x 4"      | 3/8"       | 11.6            | 500           |
| 1/2" x 2-1/4"  | 1/2"       | 12.2            | 500           |
| 1/2" x 2-3/4"  | 1/2"       | 14.6            | 350           |
| 1/2" x 3"      | 1/2"       | 15.1            | 350           |
| 1/2" x 4"      | 1/2"       | 20.3            | 300           |
| 5/8" x 3"      | 5/8"       | 28.5            | 200           |
| 5/8" x 4-1/4"  | 5/8"       | 38.7            | 150           |
| 3/4" x 4-1/4"  | 3/4"       | 59              | 100           |





## SLEEVE ANCHORS







## SLEEVE ANCHORS

**Stainless steel 18-8 :** A corrosion resistant steel alloy. The most common stainless steel for general hardware use.

**Stainless steel 316 :** A highly corrosion resistant grade of stainless steel. Ideal in salt water and chlorine environments.

**Zinc plated steel :** A low carbon steel for general use. Zinc plated for moderate corrosion resistance.

**Steel plain finish :** A low carbon steel for general use. Un-plated finish.

**B7 alloy steel plain finish :** A high strength heat treated alloy steel. Intended for use in high temperature, high pressure and special purpose applications. Un-plated finish.

**Hot dipped galvanized steel :** A low carbon steel for general use. Hot dipped galvanized is a coating for very good corrosion resistance.

**Brass Solid brass.** An alloy of primarily copper and zinc with good corrosion resistance. Used mostly in decorative and electrical applications. Exact color varies.

**Silicon bronze Solid bronze.** An alloy of copper with greater strength and corrosion resistance than brass. Exact color varies.





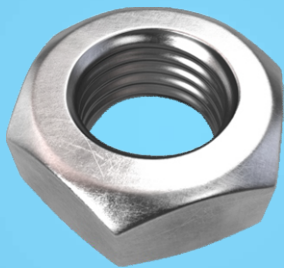
## MISC COUPLING NUT



DOOM NUT



FLENCE NUT



JAM NUT



SQUARE NUT



WING NUT LONG



WING NUT SHORT



SLOTTED NUT

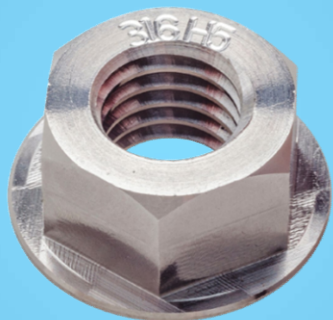


SPECIAL NUT WITH BOLT



# ASHWANI IMPORTS & EXPORTS

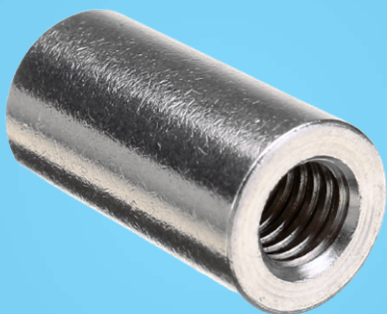
## MISC COUPLING NUT



AXLE NUTS



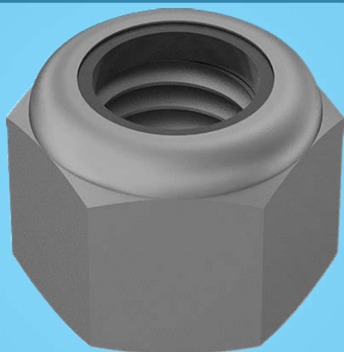
HEX COUPLING NUTS



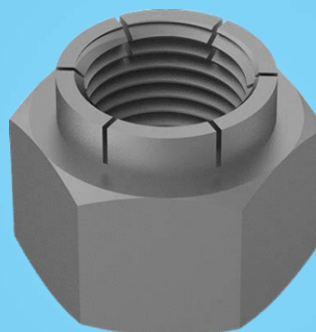
ROUND COUPLING NUTS



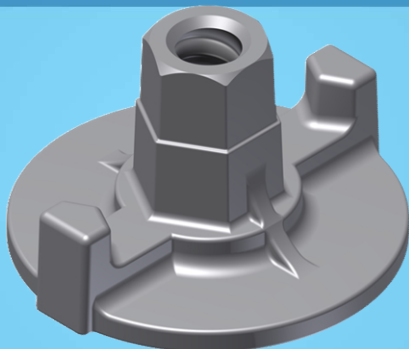
COUPLING NUT BRASS



NYLOCK NUT WITH RUBBER



SPECIAL NUT



WING NUT



RUBBER CLAMP





## SPECIAL BOLTS







# ASHWANI IMPORTS & EXPORTS

## THREADING TOOLS AND TAPS



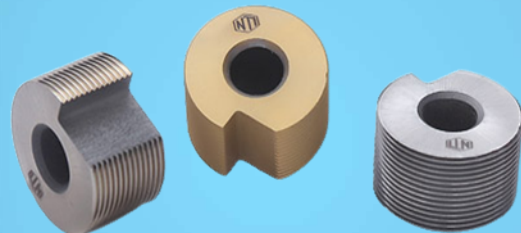
NUT THREADING TAPS



SPECIAL THREADING TAPS



THREADING MOUSE



ROLLER THREADING



MILLING CUTTER



MILLING CUTTER



MILLING CUTTER



MILLING CUTTER



## THREADING TOOLS AND TAPS



DIE HEAD FOR THREADING MACHINE & GEARS



TOOL BITS



CUTTING TOOLS



HANDTHREAD DIES



PENCIL GRINDING TOOLS





ASHWANI IMPORTS & EXPORTS

## CHAIN LINK FENCE & ACCESSORIES





## FENCE AND ACCESSORIES

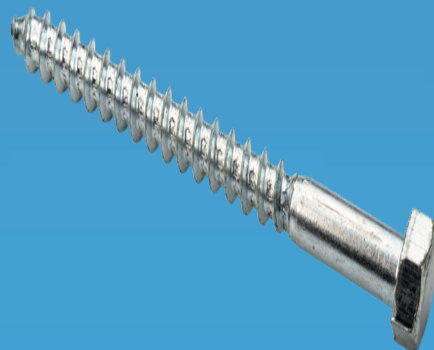
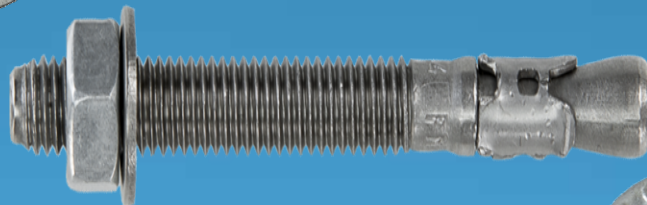
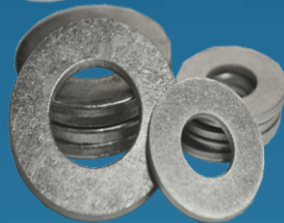






ASHWANI IMPORTS & EXPORTS

# FASTENERS





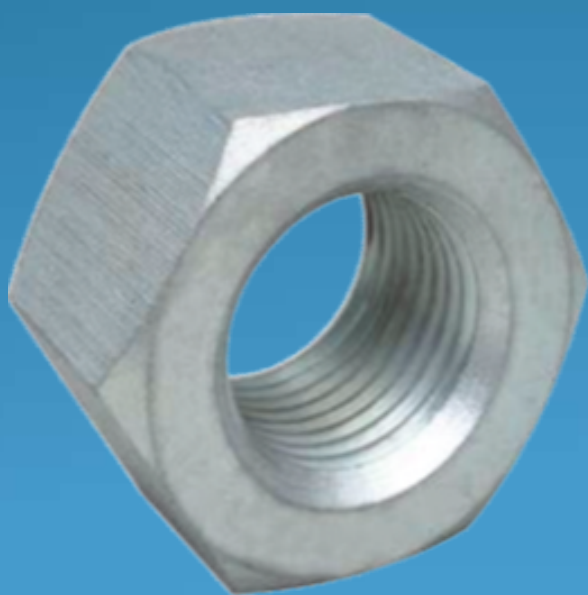




ASHWANI IMPORTS & EXPORTS

## STUD BOLT WITH 2 NUTS

ASTM A193 GR B7 / B7M / L7 / L7M





| Stud Bolts Weight Chart |         |       |       |       | WEIGHT (Kg) PER 1 PIECE Stud Bolt |       |       |       |
|-------------------------|---------|-------|-------|-------|-----------------------------------|-------|-------|-------|
| Length                  | Length  | Dia   | Dia   | Dia   | Dia                               | Dia   | Dia   | Dia   |
| mm(L)                   | inch(L) | 3/8   | 7/16  | 1/2   | 9/16                              | 5/8   | 3/4   | 7/8   |
| 50                      | 2       | 0.054 | 0.073 | 0.108 | 0.135                             | 0.172 | 0.279 | 0.4   |
| 55                      | 2.1/4   | 0.056 | 0.076 | 0.113 | 0.14                              | 0.178 | 0.289 | 0.413 |
| 60                      | 2.3/8   | 0.058 | 0.079 | 0.117 | 0.145                             | 0.184 | 0.298 | 0.425 |
| 65                      | 2.1/2   | 0.061 | 0.082 | 0.121 | 0.15                              | 0.191 | 0.307 | 0.438 |
| 70                      | 2.3/4   | 0.063 | 0.085 | 0.125 | 0.155                             | 0.197 | 0.317 | 0.451 |
| 75                      | 3       | 0.065 | 0.087 | 0.129 | 0.16                              | 0.203 | 0.326 | 0.464 |
| 80                      | 3.1/8   | 0.067 | 0.09  | 0.133 | 0.165                             | 0.21  | 0.335 | 0.477 |
| 85                      | 3.1/4   | 0.069 | 0.093 | 0.137 | 0.17                              | 0.216 | 0.345 | 0.489 |
| 90                      | 3.1/2   | 0.071 | 0.096 | 0.141 | 0.174                             | 0.222 | 0.354 | 0.502 |
| 95                      | 3.3/4   | 0.074 | 0.099 | 0.145 | 0.179                             | 0.229 | 0.363 | 0.515 |
| 100                     | 4       | 0.076 | 0.102 | 0.149 | 0.184                             | 0.235 | 0.373 | 0.528 |
| 105                     | 4.1/8   | 0.078 | 0.105 | 0.153 | 0.189                             | 0.242 | 0.382 | 0.541 |
| 110                     | 4.1/4   | 0.08  | 0.108 | 0.157 | 0.194                             | 0.248 | 0.391 | 0.553 |
| 115                     | 4.1/2   | 0.082 | 0.111 | 0.161 | 0.199                             | 0.254 | 0.401 | 0.566 |
| 120                     | 4.3/4   | 0.084 | 0.114 | 0.165 | 0.204                             | 0.261 | 0.41  | 0.579 |
| 125                     | 5       | 0.086 | 0.117 | 0.169 | 0.209                             | 0.267 | 0.42  | 0.592 |
| 130                     | 5.1/8   | 0.089 | 0.12  | 0.173 | 0.214                             | 0.273 | 0.429 | 0.605 |
| 135                     | 5.1/4   | 0.091 | 0.123 | 0.177 | 0.219                             | 0.28  | 0.438 | 0.617 |
| 140                     | 5.1/2   | 0.093 | 0.126 | 0.181 | 0.224                             | 0.286 | 0.448 | 0.63  |
| 145                     | 5.3/4   | 0.095 | 0.128 | 0.185 | 0.229                             | 0.292 | 0.457 | 0.643 |
| 150                     | 6       | 0.097 | 0.131 | 0.189 | 0.234                             | 0.299 | 0.466 | 0.656 |
| 155                     | 6.1/8   | 0.099 | 0.134 | 0.193 | 0.239                             | 0.305 | 0.476 | 0.669 |
| 160                     | 6.1/4   | 0.102 | 0.137 | 0.197 | 0.244                             | 0.311 | 0.485 | 0.681 |
| 165                     | 6.1/2   | 0.104 | 0.14  | 0.201 | 0.249                             | 0.318 | 0.494 | 0.694 |
| 170                     | 6.3/4   | 0.106 | 0.143 | 0.205 | 0.254                             | 0.324 | 0.504 | 0.707 |
| 175                     | 6.7/8   | 0.108 | 0.146 | 0.209 | 0.259                             | 0.33  | 0.513 | 0.72  |
| 180                     | 7       | 0.11  | 0.149 | 0.213 | 0.264                             | 0.337 | 0.522 | 0.733 |
| 185                     | 7.1/4   | 0.112 | 0.152 | 0.217 | 0.269                             | 0.343 | 0.532 | 0.745 |
| 190                     | 7.1/2   | 0.114 | 0.155 | 0.221 | 0.274                             | 0.349 | 0.541 | 0.758 |
| 195                     | 7.3/4   | 0.117 | 0.158 | 0.225 | 0.279                             | 0.356 | 0.55  | 0.771 |
| 200                     | 7.7/8   | 0.119 | 0.161 | 0.229 | 0.284                             | 0.362 | 0.56  | 0.784 |
| 205                     | 8       | 0.121 | 0.164 | 0.233 | 0.289                             | 0.369 | 0.569 | 0.797 |
| 210                     | 8.1/4   | 0.123 | 0.167 | 0.237 | 0.294                             | 0.375 | 0.578 | 0.809 |
| 215                     | 8.1/2   | 0.125 | 0.169 | 0.241 | 0.299                             | 0.381 | 0.588 | 0.822 |
| 220                     | 8.3/4   | 0.127 | 0.172 | 0.245 | 0.304                             | 0.388 | 0.597 | 0.835 |
| 225                     | 8.7/8   | 0.13  | 0.175 | 0.249 | 0.309                             | 0.394 | 0.607 | 0.848 |
| 230                     | 9       | 0.132 | 0.178 | 0.253 | 0.314                             | 0.4   | 0.616 | 0.861 |
| 235                     | 9.1/4   | 0.134 | 0.181 | 0.257 | 0.319                             | 0.407 | 0.625 | 0.873 |
| 240                     | 9.1/2   | 0.136 | 0.184 | 0.261 | 0.324                             | 0.413 | 0.635 | 0.886 |
| 245                     | 9.5/8   | 0.138 | 0.187 | 0.265 | 0.329                             | 0.419 | 0.644 | 0.899 |
| 250                     | 9.3/4   | 0.14  | 0.19  | 0.269 | 0.334                             | 0.426 | 0.653 | 0.912 |





| Stud Bolts Weight Chart |         |       |        |       | WEIGHT (Kg) PER 1 PIECE Stud Bolt |       |       |       |
|-------------------------|---------|-------|--------|-------|-----------------------------------|-------|-------|-------|
| Length                  | Length  | Dia   | Dia    | Dia   | Dia                               | Dia   | Dia   | Dia   |
| mm(L)                   | inch(L) | 3/8   | 7/16   | 1/2   | 9/16                              | 5/8   | 3/4   | 7/8   |
| 255                     | 10      | 0.142 | 0.193  | 0.274 | 0.339                             | 0.432 | 0.663 | 0.925 |
| 260                     | 10.1/4  | 0.145 | 0.196  | 0.278 | 0.344                             | 0.438 | 0.672 | 0.937 |
| 265                     | 10.1/2  | 0.147 | 0.199  | 0.282 | 0.349                             | 0.445 | 0.681 | 0.95  |
| 270                     | 10.5/8  | 0.149 | 0.202  | 0.286 | 0.354                             | 0.451 | 0.691 | 0.963 |
| 275                     | 10.3/4  | 0.151 | 0.205  | 0.29  | 0.359                             | 0.457 | 0.7   | 0.976 |
| d/I                     |         | 8-Mar | 16-Jul | 2-Jan | 16-Sep                            | 8-May | 4-Mar | 8-Jul |
| 280                     | 11      | 0.153 | 0.208  | 0.294 | 0.364                             | 0.464 | 0.709 | 0.989 |
| 285                     | 11.1/4  | 0.155 | 0.21   | 0.298 | 0.369                             | 0.47  | 0.719 | 1.001 |
| 290                     | 11.1/2  | 0.158 | 0.213  | 0.302 | 0.374                             | 0.476 | 0.728 | 1.014 |
| 295                     | 11.5/8  | 0.16  | 0.216  | 0.306 | 0.379                             | 0.483 | 0.737 | 1.027 |
| 300                     | 11.3/4  | 0.162 | 0.219  | 0.31  | 0.384                             | 0.489 | 0.747 | 1.04  |
| 305                     | 12      | 0.164 | 0.222  | 0.314 | 0.389                             | 0.496 | 0.756 | 1.053 |
| 310                     | 12.1/4  | 0.166 | 0.225  | 0.318 | 0.394                             | 0.502 | 0.765 | 1.065 |
| 315                     | 12.1/2  | 0.168 | 0.228  | 0.322 | 0.399                             | 0.508 | 0.775 | 1.078 |
| 320                     | 12.5/8  | 0.17  | 0.231  | 0.326 | 0.404                             | 0.515 | 0.784 | 1.091 |
| 325                     | 12.3/4  | 0.173 | 0.234  | 0.33  | 0.409                             | 0.521 | 0.794 | 1.104 |
| 330                     | 13      | 0.175 | 0.237  | 0.334 | 0.414                             | 0.527 | 0.803 | 1.117 |
| 335                     | 13.1/4  | 0.177 | 0.24   | 0.338 | 0.419                             | 0.534 | 0.812 | 1.129 |
| 340                     | 13.3/8  | 0.179 | 0.243  | 0.342 | 0.424                             | 0.54  | 0.822 | 1.142 |
| 345                     | 13.1/2  | 0.181 | 0.246  | 0.346 | 0.429                             | 0.546 | 0.831 | 1.155 |
| 350                     | 13.3/4  | 0.183 | 0.249  | 0.35  | 0.434                             | 0.553 | 0.84  | 1.168 |
| 355                     | 14      | 0.186 | 0.251  | 0.354 | 0.439                             | 0.559 | 0.85  | 1.181 |
| 360                     | 14.1/4  | 0.188 | 0.254  | 0.358 | 0.444                             | 0.565 | 0.859 | 1.193 |
| 365                     | 14.3/8  | 0.19  | 0.257  | 0.362 | 0.449                             | 0.572 | 0.868 | 1.206 |
| 370                     | 14.1/2  | 0.192 | 0.26   | 0.366 | 0.454                             | 0.578 | 0.878 | 1.219 |
| 375                     | 14.3/4  | 0.194 | 0.263  | 0.37  | 0.459                             | 0.584 | 0.887 | 1.232 |
| 380                     | 15      | 0.196 | 0.266  | 0.374 | 0.464                             | 0.591 | 0.896 | 1.245 |
| 385                     | 15.1/4  | 0.199 | 0.269  | 0.378 | 0.469                             | 0.597 | 0.906 | 1.257 |
| 390                     | 15.3/8  | 0.201 | 0.272  | 0.382 | 0.474                             | 0.603 | 0.915 | 1.27  |
| 395                     | 15.1/2  | 0.203 | 0.275  | 0.386 | 0.479                             | 0.61  | 0.924 | 1.283 |
| 400                     | 15.3/4  | 0.205 | 0.278  | 0.39  | 0.483                             | 0.616 | 0.934 | 1.296 |
| 405                     | 16      | 0.207 | 0.281  | 0.394 | 0.488                             | 0.623 | 0.943 | 1.309 |
| 410                     | 16.1/4  | 0.209 | 0.284  | 0.398 | 0.493                             | 0.629 | 0.952 | 1.321 |
| 415                     | 16.3/8  | 0.211 | 0.287  | 0.402 | 0.498                             | 0.635 | 0.962 | 1.334 |
| 420                     | 16.1/2  | 0.214 | 0.29   | 0.406 | 0.503                             | 0.642 | 0.971 | 1.347 |
| 425                     | 16.3/4  | 0.216 | 0.292  | 0.41  | 0.508                             | 0.648 | 0.981 | 1.36  |
| 430                     | 17      | 0.218 | 0.295  | 0.414 | 0.513                             | 0.654 | 0.99  | 1.373 |
| 435                     | 17.1/8  | 0.22  | 0.298  | 0.418 | 0.518                             | 0.661 | 0.999 | 1.385 |
| 440                     | 17.1/4  | 0.222 | 0.301  | 0.422 | 0.523                             | 0.667 | 1.009 | 1.398 |
| 445                     | 17.1/2  | 0.224 | 0.304  | 0.426 | 0.528                             | 0.673 | 1.018 | 1.411 |
| 450                     | 17.3/4  | 0.227 | 0.307  | 0.43  | 0.533                             | 0.68  | 1.027 | 1.424 |
| 455                     | 18      | 0.229 | 0.31   | 0.435 | 0.538                             | 0.686 | 1.037 | 1.437 |
| 460                     | 18.1/8  | 0.231 | 0.313  | 0.439 | 0.543                             | 0.692 | 1.046 | 1.449 |
| 465                     | 18.1/4  | 0.233 | 0.316  | 0.443 | 0.548                             | 0.699 | 1.055 | 1.462 |
| 470                     | 18.1/2  | 0.235 | 0.319  | 0.447 | 0.553                             | 0.705 | 1.065 | 1.475 |
| 475                     | 18.3/4  | 0.237 | 0.322  | 0.451 | 0.558                             | 0.711 | 1.074 | 1.488 |
| 480                     | 18.7/8  | 0.239 | 0.325  | 0.455 | 0.563                             | 0.718 | 1.083 | 1.501 |
| 485                     | 19      | 0.242 | 0.328  | 0.459 | 0.568                             | 0.724 | 1.093 | 1.513 |
| 490                     | 19.1/4  | 0.244 | 0.331  | 0.463 | 0.573                             | 0.73  | 1.102 | 1.526 |
| 495                     | 19.1/2  | 0.246 | 0.333  | 0.467 | 0.578                             | 0.737 | 1.111 | 1.539 |
| 500                     | 19.3/4  | 0.248 | 0.336  | 0.471 | 0.583                             | 0.743 | 1.121 | 1.552 |



# ASHWANI IMPORTS & EXPORTS

| Stud Bolts Weight Chart |         |       |       | WEIGHT (Kg) PER 1 PIECE Stud Bolt |       |       |       |
|-------------------------|---------|-------|-------|-----------------------------------|-------|-------|-------|
| Length                  | Length  | Dia   | Dia   | Dia                               | Dia   | Dia   | Dia   |
| mm(L)                   | inch(L) | 1     | 1.1/8 | 1.1/4                             | 1.3/8 | 1.1/2 | 1.5/8 |
| 50                      | 2       | 0.554 | 0.747 | 0.96                              | 1.229 | 1.543 | 1.95  |
| 55                      | 2.1/4   | 0.571 | 0.768 | 0.988                             | 1.263 | 1.583 | 1.997 |
| 60                      | 2.3/8   | 0.587 | 0.79  | 1.015                             | 1.296 | 1.623 | 2.045 |
| 65                      | 2.1/2   | 0.604 | 0.812 | 1.042                             | 1.329 | 1.663 | 2.092 |
| 70                      | 2.3/4   | 0.621 | 0.833 | 1.069                             | 1.362 | 1.703 | 2.139 |
| 75                      | 3       | 0.638 | 0.855 | 1.096                             | 1.396 | 1.743 | 2.187 |
| 80                      | 3.1/8   | 0.655 | 0.876 | 1.123                             | 1.429 | 1.783 | 2.234 |
| 85                      | 3.1/4   | 0.671 | 0.898 | 1.151                             | 1.462 | 1.823 | 2.282 |
| 90                      | 3.1/2   | 0.688 | 0.92  | 1.178                             | 1.495 | 1.863 | 2.329 |
| 95                      | 3.3/4   | 0.705 | 0.941 | 1.205                             | 1.529 | 1.903 | 2.376 |
| 100                     | 4       | 0.722 | 0.963 | 1.232                             | 1.562 | 1.943 | 2.424 |
| 105                     | 4.1/8   | 0.739 | 0.985 | 1.259                             | 1.595 | 1.983 | 2.471 |
| 110                     | 4.1/4   | 0.755 | 1.006 | 1.286                             | 1.628 | 2.023 | 2.519 |
| 115                     | 4.1/2   | 0.772 | 1.028 | 1.313                             | 1.662 | 2.063 | 2.566 |
| 120                     | 4.3/4   | 0.789 | 1.05  | 1.341                             | 1.695 | 2.103 | 2.613 |
| 125                     | 5       | 0.806 | 1.071 | 1.368                             | 1.728 | 2.143 | 2.661 |
| 130                     | 5.1/8   | 0.823 | 1.093 | 1.395                             | 1.761 | 2.183 | 2.708 |
| 135                     | 5.1/4   | 0.839 | 1.115 | 1.422                             | 1.795 | 2.223 | 2.756 |
| 140                     | 5.1/2   | 0.856 | 1.136 | 1.449                             | 1.828 | 2.263 | 2.803 |
| 145                     | 5.3/4   | 0.873 | 1.158 | 1.476                             | 1.861 | 2.304 | 2.85  |
| 150                     | 6       | 0.89  | 1.18  | 1.503                             | 1.894 | 2.344 | 2.898 |
| 155                     | 6.1/8   | 0.907 | 1.201 | 1.531                             | 1.928 | 2.384 | 2.945 |
| 160                     | 6.1/4   | 0.923 | 1.223 | 1.558                             | 1.961 | 2.424 | 2.993 |
| 165                     | 6.1/2   | 0.94  | 1.245 | 1.585                             | 1.994 | 2.464 | 3.04  |
| 170                     | 6.3/4   | 0.957 | 1.266 | 1.612                             | 2.027 | 2.504 | 3.087 |
| 175                     | 6.7/8   | 0.974 | 1.288 | 1.639                             | 2.061 | 2.544 | 3.135 |
| 180                     | 7       | 0.991 | 1.309 | 1.666                             | 2.094 | 2.584 | 3.182 |
| 185                     | 7.1/4   | 1.007 | 1.331 | 1.694                             | 2.127 | 2.624 | 3.23  |
| 190                     | 7.1/2   | 1.024 | 1.353 | 1.721                             | 2.16  | 2.664 | 3.277 |
| 195                     | 7.3/4   | 1.041 | 1.374 | 1.748                             | 2.194 | 2.704 | 3.324 |
| 200                     | 7.7/8   | 1.058 | 1.396 | 1.775                             | 2.227 | 2.744 | 3.372 |
| 205                     | 8       | 1.075 | 1.418 | 1.802                             | 2.26  | 2.784 | 3.419 |
| 210                     | 8.1/4   | 1.091 | 1.439 | 1.829                             | 2.293 | 2.824 | 3.467 |
| 215                     | 8.1/2   | 1.108 | 1.461 | 1.856                             | 2.327 | 2.864 | 3.514 |
| 220                     | 8.3/4   | 1.125 | 1.483 | 1.884                             | 2.36  | 2.904 | 3.561 |
| 225                     | 8.7/8   | 1.142 | 1.504 | 1.911                             | 2.393 | 2.944 | 3.609 |
| 230                     | 9       | 1.159 | 1.526 | 1.938                             | 2.426 | 2.984 | 3.656 |
| 235                     | 9.1/4   | 1.175 | 1.548 | 1.965                             | 2.46  | 3.024 | 3.704 |
| 240                     | 9.1/2   | 1.192 | 1.569 | 1.992                             | 2.493 | 3.064 | 3.751 |
| 245                     | 9.5/8   | 1.209 | 1.591 | 2.019                             | 2.526 | 3.105 | 3.798 |
| 250                     | 9.3/4   | 1.226 | 1.613 | 2.046                             | 2.559 | 3.145 | 3.846 |



| Stud Bolts Weight Chart |         |       |       | WEIGHT (Kg) PER 1 PIECE Stud Bolt |       |       |       |
|-------------------------|---------|-------|-------|-----------------------------------|-------|-------|-------|
| Length                  | Length  | Dia   | Dia   | Dia                               | Dia   | Dia   | Dia   |
| mm(L)                   | inch(L) | 1     | 1.1/8 | 1.1/4                             | 1.3/8 | 1.1/2 | 1.5/8 |
| 255                     | 10      | 1.243 | 1.634 | 2.074                             | 2.593 | 3.185 | 3.893 |
| 260                     | 10.1/4  | 1.259 | 1.656 | 2.101                             | 2.626 | 3.225 | 3.941 |
| 265                     | 10.1/2  | 1.276 | 1.678 | 2.128                             | 2.659 | 3.265 | 3.988 |
| 270                     | 10.5/8  | 1.293 | 1.699 | 2.155                             | 2.692 | 3.305 | 4.035 |
| 275                     | 10.3/4  | 1.31  | 1.721 | 2.182                             | 2.726 | 3.345 | 4.083 |
| 280                     | 11      | 1.327 | 1.742 | 2.209                             | 2.759 | 3.385 | 4.13  |
| 285                     | 11.1/4  | 1.343 | 1.764 | 2.237                             | 2.792 | 3.425 | 4.178 |
| 290                     | 11.1/2  | 1.36  | 1.786 | 2.264                             | 2.825 | 3.465 | 4.225 |
| 295                     | 11.5/8  | 1.377 | 1.807 | 2.291                             | 2.859 | 3.505 | 4.272 |
| 300                     | 11.3/4  | 1.394 | 1.829 | 2.318                             | 2.892 | 3.545 | 4.32  |
| 305                     | 12      | 1.411 | 1.851 | 2.345                             | 2.925 | 3.585 | 4.367 |
| 310                     | 12.1/4  | 1.427 | 1.872 | 2.372                             | 2.958 | 3.625 | 4.415 |
| 315                     | 12.1/2  | 1.444 | 1.894 | 2.399                             | 2.992 | 3.665 | 4.462 |
| 320                     | 12.5/8  | 1.461 | 1.916 | 2.427                             | 3.025 | 3.705 | 4.509 |
| 325                     | 12.3/4  | 1.478 | 1.937 | 2.454                             | 3.058 | 3.745 | 4.557 |
| 330                     | 13      | 1.495 | 1.959 | 2.481                             | 3.091 | 3.785 | 4.604 |
| 335                     | 13.1/4  | 1.511 | 1.981 | 2.508                             | 3.125 | 3.825 | 4.652 |
| 340                     | 13.3/8  | 1.528 | 2.002 | 2.535                             | 3.158 | 3.865 | 4.699 |
| 345                     | 13.1/2  | 1.545 | 2.024 | 2.562                             | 3.191 | 3.906 | 4.746 |
| 350                     | 13.3/4  | 1.562 | 2.046 | 2.589                             | 3.224 | 3.946 | 4.794 |
| 355                     | 14      | 1.579 | 2.067 | 2.617                             | 3.258 | 3.986 | 4.841 |
| 360                     | 14.1/4  | 1.595 | 2.089 | 2.644                             | 3.291 | 4.026 | 4.889 |
| 365                     | 14.3/8  | 1.612 | 2.111 | 2.671                             | 3.324 | 4.066 | 4.936 |
| 370                     | 14.1/2  | 1.629 | 2.132 | 2.698                             | 3.357 | 4.106 | 4.983 |
| 375                     | 14.3/4  | 1.646 | 2.154 | 2.725                             | 3.391 | 4.146 | 5.031 |
| 380                     | 15      | 1.663 | 2.175 | 2.752                             | 3.424 | 4.186 | 5.078 |
| 385                     | 15.1/4  | 1.679 | 2.197 | 2.78                              | 3.457 | 4.226 | 5.126 |
| 390                     | 15.3/8  | 1.696 | 2.219 | 2.807                             | 3.49  | 4.266 | 5.173 |
| 395                     | 15.1/2  | 1.713 | 2.24  | 2.834                             | 3.524 | 4.306 | 5.22  |
| 400                     | 15.3/4  | 1.73  | 2.262 | 2.861                             | 3.557 | 4.346 | 5.268 |
| 405                     | 16      | 1.747 | 2.284 | 2.888                             | 3.59  | 4.386 | 5.315 |
| 410                     | 16.1/4  | 1.763 | 2.305 | 2.915                             | 3.623 | 4.426 | 5.363 |
| 415                     | 16.3/8  | 1.78  | 2.327 | 2.942                             | 3.657 | 4.466 | 5.41  |
| 420                     | 16.1/2  | 1.797 | 2.349 | 2.97                              | 3.69  | 4.506 | 5.457 |
| 425                     | 16.3/4  | 1.814 | 2.37  | 2.997                             | 3.723 | 4.546 | 5.505 |
| 430                     | 17      | 1.831 | 2.392 | 3.024                             | 3.756 | 4.586 | 5.552 |
| 435                     | 17.1/8  | 1.847 | 2.414 | 3.051                             | 3.79  | 4.626 | 5.6   |
| 440                     | 17.1/4  | 1.864 | 2.435 | 3.078                             | 3.823 | 4.666 | 5.647 |
| 445                     | 17.1/2  | 1.881 | 2.457 | 3.105                             | 3.856 | 4.707 | 5.694 |
| 450                     | 17.3/4  | 1.898 | 2.479 | 3.132                             | 3.889 | 4.747 | 5.742 |
| 455                     | 18      | 1.915 | 2.5   | 3.16                              | 3.923 | 4.787 | 5.789 |
| 460                     | 18.1/8  | 1.931 | 2.522 | 3.187                             | 3.956 | 4.827 | 5.837 |
| 465                     | 18.1/4  | 1.948 | 2.544 | 3.214                             | 3.989 | 4.867 | 5.884 |
| 470                     | 18.1/2  | 1.965 | 2.565 | 3.241                             | 4.022 | 4.907 | 5.931 |
| 475                     | 18.3/4  | 1.982 | 2.587 | 3.268                             | 4.056 | 4.947 | 5.979 |
| 480                     | 18.7/8  | 1.999 | 2.608 | 3.295                             | 4.089 | 4.987 | 6.026 |
| 485                     | 19      | 2.015 | 2.63  | 3.323                             | 4.122 | 5.027 | 6.074 |
| 490                     | 19.1/4  | 2.032 | 2.652 | 3.35                              | 4.155 | 5.067 | 6.121 |
| 495                     | 19.1/2  | 2.049 | 2.673 | 3.377                             | 4.189 | 5.107 | 6.168 |
| 500                     | 19.3/4  | 2.066 | 2.695 | 3.404                             | 4.222 | 5.147 | 6.216 |



| Stud Bolts Weight Chart |         |       |       |       | WEIGHT (Kg) PER 1 PIECE Stud Bolt |       |        |
|-------------------------|---------|-------|-------|-------|-----------------------------------|-------|--------|
| Length                  | Length  | Dia   | Dia   | Dia   | Dia                               | Dia   | Dia    |
| mm(L)                   | inch(L) | 1     | 1.3/4 | 1.7/8 | 2                                 | 2.1/4 | 2.1/2  |
| 50                      | 2       | 0.554 | 2.333 | 2.83  | 3.394                             | 4.667 | 6.282  |
| 55                      | 2.1/4   | 0.571 | 2.389 | 2.894 | 3.467                             | 4.761 | 6.398  |
| 60                      | 2.3/8   | 0.587 | 2.444 | 2.958 | 3.54                              | 4.854 | 6.515  |
| 65                      | 2.1/2   | 0.604 | 2.5   | 3.022 | 3.613                             | 4.948 | 6.631  |
| 70                      | 2.3/4   | 0.621 | 2.555 | 3.086 | 3.686                             | 5.041 | 6.748  |
| 75                      | 3       | 0.638 | 2.611 | 3.15  | 3.759                             | 5.135 | 6.864  |
| 80                      | 3.1/8   | 0.655 | 2.666 | 3.214 | 3.832                             | 5.228 | 6.981  |
| 85                      | 3.1/4   | 0.671 | 2.722 | 3.278 | 3.905                             | 5.322 | 7.097  |
| 90                      | 3.1/2   | 0.688 | 2.777 | 3.342 | 3.978                             | 5.415 | 7.214  |
| 95                      | 3.3/4   | 0.705 | 2.833 | 3.406 | 4.051                             | 5.509 | 7.33   |
| 100                     | 4       | 0.722 | 2.888 | 3.47  | 4.124                             | 5.602 | 7.447  |
| 105                     | 4.1/8   | 0.739 | 2.944 | 3.534 | 4.197                             | 5.696 | 7.563  |
| 110                     | 4.1/4   | 0.755 | 2.999 | 3.598 | 4.27                              | 5.789 | 7.68   |
| 115                     | 4.1/2   | 0.772 | 3.055 | 3.662 | 4.343                             | 5.883 | 7.796  |
| 120                     | 4.3/4   | 0.789 | 3.11  | 3.726 | 4.416                             | 5.976 | 7.913  |
| 125                     | 5       | 0.806 | 3.166 | 3.79  | 4.489                             | 6.07  | 8.029  |
| 130                     | 5.1/8   | 0.823 | 3.221 | 3.854 | 4.562                             | 6.163 | 8.146  |
| 135                     | 5.1/4   | 0.839 | 3.277 | 3.918 | 4.635                             | 6.257 | 8.262  |
| 140                     | 5.1/2   | 0.856 | 3.33  | 3.982 | 4.708                             | 6.35  | 8.379  |
| 145                     | 5.3/4   | 0.873 | 3.388 | 4.046 | 4.781                             | 6.444 | 8.495  |
| 150                     | 6       | 0.89  | 3.443 | 4.11  | 4.854                             | 6.537 | 8.612  |
| 155                     | 6.1/8   | 0.907 | 3.499 | 4.174 | 4.927                             | 6.631 | 8.728  |
| 160                     | 6.1/4   | 0.923 | 3.554 | 4.238 | 5                                 | 6.724 | 8.845  |
| 165                     | 6.1/2   | 0.94  | 3.61  | 4.302 | 5.073                             | 6.818 | 8.961  |
| 170                     | 6.3/4   | 0.957 | 3.665 | 4.366 | 5.146                             | 6.911 | 9.078  |
| 175                     | 6.7/8   | 0.974 | 3.721 | 4.43  | 5.219                             | 7.005 | 9.194  |
| 180                     | 7       | 0.991 | 3.776 | 4.494 | 5.292                             | 7.098 | 9.311  |
| 185                     | 7.1/4   | 1.007 | 3.832 | 4.558 | 5.365                             | 7.192 | 9.427  |
| 190                     | 7.1/2   | 1.024 | 3.887 | 4.622 | 5.438                             | 7.285 | 9.544  |
| 195                     | 7.3/4   | 1.041 | 3.943 | 4.686 | 5.511                             | 7.379 | 9.66   |
| 200                     | 7.7/8   | 1.058 | 3.998 | 4.75  | 5.584                             | 7.472 | 9.777  |
| 205                     | 8       | 1.075 | 4.054 | 4.814 | 5.657                             | 7.566 | 9.893  |
| 210                     | 8.1/4   | 1.091 | 4.109 | 4.878 | 5.73                              | 7.659 | 10.01  |
| 215                     | 8.1/2   | 1.108 | 4.165 | 4.942 | 5.803                             | 7.753 | 10.126 |
| 220                     | 8.3/4   | 1.125 | 4.22  | 5.006 | 5.876                             | 7.846 | 10.243 |
| 225                     | 8.7/8   | 1.142 | 4.276 | 5.07  | 5.949                             | 7.94  | 10.359 |
| 230                     | 9       | 1.159 | 4.331 | 5.134 | 6.022                             | 8.033 | 10.476 |
| 235                     | 9.1/4   | 1.175 | 4.387 | 5.198 | 6.095                             | 8.127 | 10.592 |
| 240                     | 9.1/2   | 1.192 | 4.442 | 5.262 | 6.168                             | 8.22  | 10.709 |
| 245                     | 9.5/8   | 1.209 | 4.498 | 5.326 | 6.241                             | 8.314 | 10.825 |
| 250                     | 9.3/4   | 1.226 | 4.553 | 5.39  | 6.314                             | 8.407 | 10.942 |





# ASHWANI IMPORTS & EXPORTS

| Stud Bolts Weight Chart |         |       |       |       | WEIGHT (Kg) PER 1 PIECE Stud Bolt |        |        |
|-------------------------|---------|-------|-------|-------|-----------------------------------|--------|--------|
| Length                  | Length  | Dia   | Dia   | Dia   | Dia                               | Dia    | Dia    |
| mm(L)                   | inch(L) | 1     | 1.3/4 | 1.7/8 | 2                                 | 2.1/4  | 2.1/2  |
| 255                     | 10      | 1.243 | 4.609 | 5.454 | 6.387                             | 8.501  | 11.058 |
| 260                     | 10.1/4  | 1.259 | 4.664 | 5.518 | 6.46                              | 8.594  | 11.175 |
| 265                     | 10.1/2  | 1.276 | 4.72  | 5.582 | 6.533                             | 8.688  | 11.291 |
| 270                     | 10.5/8  | 1.293 | 4.775 | 5.646 | 6.606                             | 8.781  | 11.408 |
| 275                     | 10.3/4  | 1.31  | 4.831 | 5.71  | 6.679                             | 8.875  | 11.524 |
| 280                     | 11      | 1.327 | 4.886 | 5.774 | 6.752                             | 8.968  | 11.641 |
| 285                     | 11.1/4  | 1.343 | 4.942 | 5.838 | 6.825                             | 9.062  | 11.757 |
| 290                     | 11.1/2  | 1.36  | 4.997 | 5.902 | 6.898                             | 9.155  | 11.874 |
| 295                     | 11.5/8  | 1.377 | 5.053 | 5.966 | 6.971                             | 9.249  | 11.99  |
| 300                     | 11.3/4  | 1.394 | 5.108 | 6.03  | 7.044                             | 9.342  | 12.107 |
| 305                     | 12      | 1.411 | 5.164 | 6.094 | 7.117                             | 9.436  | 12.223 |
| 310                     | 12.1/4  | 1.427 | 5.219 | 6.158 | 7.19                              | 9.529  | 12.34  |
| 315                     | 12.1/2  | 1.444 | 5.275 | 6.222 | 7.263                             | 9.623  | 12.456 |
| 320                     | 12.5/8  | 1.461 | 5.33  | 6.286 | 7.336                             | 9.716  | 12.573 |
| 325                     | 12.3/4  | 1.478 | 5.386 | 6.35  | 7.409                             | 9.81   | 12.689 |
| 330                     | 13      | 1.495 | 5.441 | 6.414 | 7.482                             | 9.903  | 12.806 |
| 335                     | 13.1/4  | 1.511 | 5.497 | 6.478 | 7.555                             | 9.997  | 12.922 |
| 340                     | 13.3/8  | 1.528 | 5.552 | 6.542 | 7.628                             | 10.09  | 13.039 |
| 345                     | 13.1/2  | 1.545 | 5.608 | 6.606 | 7.701                             | 10.184 | 13.155 |
| 350                     | 13.3/4  | 1.562 | 5.663 | 6.67  | 7.774                             | 10.277 | 13.272 |
| 355                     | 14      | 1.579 | 5.719 | 6.734 | 7.847                             | 10.371 | 13.388 |
| 360                     | 14.1/4  | 1.595 | 5.774 | 6.798 | 7.92                              | 10.464 | 13.505 |
| 365                     | 14.3/8  | 1.612 | 5.83  | 6.862 | 7.993                             | 10.558 | 13.621 |
| 370                     | 14.1/2  | 1.629 | 5.885 | 6.926 | 8.066                             | 10.651 | 13.738 |
| 375                     | 14.3/4  | 1.646 | 5.941 | 6.99  | 8.139                             | 10.745 | 13.854 |
| 380                     | 15      | 1.663 | 5.996 | 7.054 | 8.212                             | 10.838 | 13.971 |
| 385                     | 15.1/4  | 1.679 | 6.052 | 7.118 | 8.285                             | 10.932 | 14.087 |
| 390                     | 15.3/8  | 1.696 | 6.107 | 7.182 | 8.358                             | 11.025 | 14.204 |
| 395                     | 15.1/2  | 1.713 | 6.163 | 7.246 | 8.431                             | 11.119 | 14.32  |
| 400                     | 15.3/4  | 1.73  | 6.218 | 7.31  | 8.504                             | 11.212 | 14.437 |
| 405                     | 16      | 1.747 | 6.274 | 7.374 | 8.577                             | 11.306 | 14.553 |
| 410                     | 16.1/4  | 1.763 | 6.329 | 7.438 | 8.65                              | 11.399 | 14.67  |
| 415                     | 16.3/8  | 1.78  | 6.385 | 7.502 | 8.723                             | 11.493 | 14.786 |
| 420                     | 16.1/2  | 1.797 | 6.44  | 7.566 | 8.796                             | 11.586 | 14.903 |
| 425                     | 16.3/4  | 1.814 | 6.496 | 7.63  | 8.869                             | 11.68  | 15.019 |
| 430                     | 17      | 1.831 | 6.551 | 7.694 | 8.942                             | 11.773 | 15.136 |
| 435                     | 17.1/8  | 1.847 | 6.607 | 7.758 | 9.015                             | 11.867 | 15.252 |
| 440                     | 17.1/4  | 1.864 | 6.662 | 7.822 | 9.088                             | 11.96  | 15.369 |
| 445                     | 17.1/2  | 1.881 | 6.718 | 7.886 | 9.161                             | 12.054 | 15.485 |
| 450                     | 17.3/4  | 1.898 | 6.773 | 7.95  | 9.234                             | 12.147 | 15.602 |
| 455                     | 18      | 1.915 | 6.829 | 8.014 | 9.307                             | 12.241 | 15.718 |
| 460                     | 18.1/8  | 1.931 | 6.884 | 8.078 | 9.38                              | 12.334 | 15.835 |
| 465                     | 18.1/4  | 1.948 | 6.94  | 8.142 | 9.453                             | 12.428 | 15.951 |
| 470                     | 18.1/2  | 1.965 | 6.995 | 8.206 | 9.526                             | 12.521 | 16.068 |
| 475                     | 18.3/4  | 1.982 | 7.051 | 8.27  | 9.599                             | 12.615 | 16.184 |
| 480                     | 18.7/8  | 1.999 | 7.106 | 8.334 | 9.672                             | 12.708 | 16.301 |
| 485                     | 19      | 2.015 | 7.162 | 8.398 | 9.745                             | 12.802 | 16.417 |
| 490                     | 19.1/4  | 2.032 | 7.217 | 8.462 | 9.818                             | 12.895 | 16.534 |
| 495                     | 19.1/2  | 2.049 | 7.273 | 8.526 | 9.891                             | 12.989 | 16.65  |
| 500                     | 19.3/4  | 2.066 | 7.328 | 8.59  | 9.964                             | 13.082 | 16.767 |



| Stud Bolts Weight Chart |         |        |        | WEIGHT (Kg) PER 1 PIECE Stud Bolt |        |        |        |
|-------------------------|---------|--------|--------|-----------------------------------|--------|--------|--------|
| Length                  | Length  | Dia    | Dia    | Dia                               | Dia    | Dia    | Dia    |
| mm(L)                   | inch(L) | 2.3/4  | 3      | 3.1/4                             | 3.1/2  | 3.3/4  | 4      |
| 50                      | 2       | 7.953  | 9.769  | 11.97                             | 15.499 | 18.579 | 22.948 |
| 55                      | 2.1/4   | 8.094  | 9.938  | 12.173                            | 15.735 | 18.844 | 23.253 |
| 60                      | 2.3/8   | 8.236  | 10.108 | 12.375                            | 15.971 | 19.109 | 23.557 |
| 65                      | 2.1/2   | 8.377  | 10.277 | 12.578                            | 16.207 | 19.374 | 23.862 |
| 70                      | 2.3/4   | 8.519  | 10.447 | 12.78                             | 16.443 | 19.639 | 24.166 |
| 75                      | 3       | 8.66   | 10.616 | 12.983                            | 16.679 | 19.904 | 24.47  |
| 80                      | 3.1/8   | 8.802  | 10.786 | 13.185                            | 16.915 | 20.169 | 24.775 |
| 85                      | 3.1/4   | 8.943  | 10.955 | 13.388                            | 17.151 | 20.434 | 25.079 |
| 90                      | 3.1/2   | 9.085  | 11.125 | 13.59                             | 17.387 | 20.699 | 25.384 |
| 95                      | 3.3/4   | 9.226  | 11.294 | 13.793                            | 17.623 | 20.964 | 25.688 |
| 100                     | 4       | 9.368  | 11.464 | 13.995                            | 17.859 | 21.229 | 25.992 |
| 105                     | 4.1/8   | 9.509  | 11.633 | 14.198                            | 18.095 | 21.494 | 26.297 |
| 110                     | 4.1/4   | 9.651  | 11.803 | 14.4                              | 18.331 | 21.759 | 26.601 |
| 115                     | 4.1/2   | 9.792  | 11.972 | 14.603                            | 18.567 | 22.024 | 26.906 |
| 120                     | 4.3/4   | 9.934  | 12.142 | 14.805                            | 18.803 | 22.289 | 27.21  |
| 125                     | 5       | 10.075 | 12.311 | 15.008                            | 19.039 | 22.554 | 27.514 |
| 130                     | 5.1/8   | 10.217 | 12.481 | 15.21                             | 19.275 | 22.819 | 27.819 |
| 135                     | 5.1/4   | 10.358 | 12.65  | 15.413                            | 19.511 | 23.084 | 28.123 |
| 140                     | 5.1/2   | 10.5   | 12.82  | 15.615                            | 19.747 | 23.349 | 28.428 |
| 145                     | 5.3/4   | 10.641 | 12.989 | 15.818                            | 19.983 | 23.614 | 28.732 |
| 150                     | 6       | 10.783 | 13.159 | 16.02                             | 20.219 | 23.879 | 29.036 |
| 155                     | 6.1/8   | 10.924 | 13.328 | 16.223                            | 20.455 | 24.144 | 29.341 |
| 160                     | 6.1/4   | 11.066 | 13.498 | 16.425                            | 20.691 | 24.409 | 29.645 |
| 165                     | 6.1/2   | 11.207 | 13.667 | 16.628                            | 20.927 | 24.674 | 29.95  |
| 170                     | 6.3/4   | 11.349 | 13.837 | 16.83                             | 21.163 | 24.939 | 30.254 |
| 175                     | 6.7/8   | 11.49  | 14.006 | 17.033                            | 21.399 | 25.204 | 30.558 |
| 180                     | 7       | 11.632 | 14.176 | 17.235                            | 21.635 | 25.469 | 30.863 |
| 185                     | 7.1/4   | 11.773 | 14.345 | 17.438                            | 21.871 | 25.734 | 31.167 |
| 190                     | 7.1/2   | 11.915 | 14.515 | 17.64                             | 22.107 | 25.999 | 31.472 |
| 195                     | 7.3/4   | 12.056 | 14.684 | 17.843                            | 22.343 | 26.264 | 31.776 |
| 200                     | 7.7/8   | 12.198 | 14.854 | 18.045                            | 22.579 | 26.529 | 32.08  |
| 205                     | 8       | 12.339 | 15.023 | 18.248                            | 22.815 | 26.794 | 32.385 |
| 210                     | 8.1/4   | 12.481 | 15.193 | 18.45                             | 23.051 | 27.059 | 32.689 |
| 215                     | 8.1/2   | 12.622 | 15.362 | 18.653                            | 23.287 | 27.324 | 32.994 |
| 220                     | 8.3/4   | 12.764 | 15.532 | 18.855                            | 23.523 | 27.589 | 33.298 |
| 225                     | 8.7/8   | 12.905 | 15.701 | 19.058                            | 23.759 | 27.854 | 33.602 |
| 230                     | 9       | 13.047 | 15.871 | 19.26                             | 23.995 | 28.119 | 33.907 |
| 235                     | 9.1/4   | 13.188 | 16.04  | 19.463                            | 24.231 | 28.384 | 34.211 |
| 240                     | 9.1/2   | 13.33  | 16.21  | 19.665                            | 24.467 | 28.649 | 34.516 |
| 245                     | 9.5/8   | 13.471 | 16.379 | 19.868                            | 24.703 | 28.914 | 34.82  |
| 250                     | 9.3/4   | 13.613 | 16.549 | 20.07                             | 24.939 | 29.179 | 35.124 |



# ASHWANI IMPORTS & EXPORTS

| Stud Bolts Weight Chart |                   |              |          | WEIGHT (Kg) PER 1 PIECE Stud Bolt |              |              |          |
|-------------------------|-------------------|--------------|----------|-----------------------------------|--------------|--------------|----------|
| Length<br>mm(L)         | Length<br>inch(L) | Dia<br>2.3/4 | Dia<br>3 | Dia<br>3.1/4                      | Dia<br>3.1/2 | Dia<br>3.3/4 | Dia<br>4 |
| 255                     | 10                | 13.754       | 16.718   | 20.273                            | 25.175       | 29.444       | 35.429   |
| 260                     | 10.1/4            | 13.896       | 16.888   | 20.475                            | 25.411       | 29.709       | 35.733   |
| 265                     | 10.1/2            | 14.037       | 17.057   | 20.678                            | 25.647       | 29.974       | 36.038   |
| 270                     | 10.5/8            | 14.179       | 17.227   | 20.88                             | 25.883       | 30.239       | 36.342   |
| 275                     | 10.3/4            | 14.32        | 17.396   | 21.083                            | 26.119       | 30.504       | 36.646   |
| 280                     | 11                | 14.462       | 17.566   | 21.285                            | 26.355       | 30.769       | 36.951   |
| 285                     | 11.1/4            | 14.603       | 17.735   | 21.488                            | 26.591       | 31.034       | 37.255   |
| 290                     | 11.1/2            | 14.745       | 17.905   | 21.69                             | 26.827       | 31.299       | 37.56    |
| 295                     | 11.5/8            | 14.886       | 18.074   | 21.893                            | 27.063       | 31.564       | 37.864   |
| 300                     | 11.3/4            | 15.028       | 18.244   | 22.095                            | 27.299       | 31.829       | 38.168   |
| 305                     | 12                | 15.169       | 18.413   | 22.298                            | 27.535       | 32.094       | 38.473   |
| 310                     | 12.1/4            | 15.311       | 18.583   | 22.5                              | 27.771       | 32.359       | 38.777   |
| 315                     | 12.1/2            | 15.452       | 18.752   | 22.703                            | 28.007       | 32.624       | 39.082   |
| 320                     | 12.5/8            | 15.594       | 18.922   | 22.905                            | 28.243       | 32.889       | 39.386   |
| 325                     | 12.3/4            | 15.735       | 19.091   | 23.108                            | 28.479       | 33.154       | 39.69    |
| 330                     | 13                | 15.877       | 19.261   | 23.31                             | 28.715       | 33.419       | 39.995   |
| 335                     | 13.1/4            | 16.018       | 19.43    | 23.513                            | 28.951       | 33.684       | 40.299   |
| 340                     | 13.3/8            | 16.16        | 19.6     | 23.715                            | 29.187       | 33.949       | 40.604   |
| 345                     | 13.1/2            | 16.301       | 19.769   | 23.918                            | 29.423       | 34.214       | 40.908   |
| 350                     | 13.3/4            | 16.443       | 19.939   | 24.12                             | 29.659       | 34.479       | 41.212   |
| 355                     | 14                | 16.584       | 20.108   | 24.323                            | 29.895       | 34.744       | 41.517   |
| 360                     | 14.1/4            | 16.726       | 20.278   | 24.525                            | 30.131       | 35.009       | 41.821   |
| 365                     | 14.3/8            | 16.867       | 20.447   | 24.728                            | 30.367       | 35.274       | 42.126   |
| 370                     | 14.1/2            | 17.009       | 20.617   | 24.93                             | 30.603       | 35.539       | 42.43    |
| 375                     | 14.3/4            | 17.15        | 20.786   | 25.133                            | 30.839       | 35.804       | 42.734   |
| 380                     | 15                | 17.292       | 20.956   | 25.335                            | 31.075       | 36.069       | 43.039   |
| 385                     | 15.1/4            | 17.433       | 21.125   | 25.538                            | 31.311       | 36.334       | 43.343   |
| 390                     | 15.3/8            | 17.575       | 21.295   | 25.74                             | 31.547       | 36.599       | 43.648   |
| 395                     | 15.1/2            | 17.716       | 21.464   | 25.943                            | 31.783       | 36.864       | 43.952   |
| 400                     | 15.3/4            | 17.858       | 21.634   | 26.145                            | 32.019       | 37.129       | 44.256   |
| 405                     | 16                | 17.999       | 21.803   | 26.348                            | 32.255       | 37.394       | 44.561   |
| 410                     | 16.1/4            | 18.141       | 21.973   | 26.55                             | 32.491       | 37.659       | 44.865   |
| 415                     | 16.3/8            | 18.282       | 22.142   | 26.753                            | 32.727       | 37.924       | 45.17    |
| 420                     | 16.1/2            | 18.424       | 22.312   | 26.955                            | 32.963       | 38.189       | 45.474   |
| 425                     | 16.3/4            | 18.565       | 22.481   | 27.158                            | 33.199       | 38.454       | 45.778   |
| 430                     | 17                | 18.707       | 22.651   | 27.36                             | 33.435       | 38.719       | 46.083   |
| 435                     | 17.1/8            | 18.848       | 22.82    | 27.563                            | 33.671       | 38.984       | 46.387   |
| 440                     | 17.1/4            | 18.99        | 22.99    | 27.765                            | 33.907       | 39.249       | 46.692   |
| 445                     | 17.1/2            | 19.131       | 23.159   | 27.968                            | 34.143       | 39.514       | 46.996   |
| 450                     | 17.3/4            | 19.273       | 23.329   | 28.17                             | 34.379       | 39.779       | 47.3     |
| 455                     | 18                | 19.414       | 23.498   | 28.373                            | 34.615       | 40.044       | 47.605   |
| 460                     | 18.1/8            | 19.556       | 23.668   | 28.575                            | 34.851       | 40.309       | 47.909   |
| 465                     | 18.1/4            | 19.697       | 23.837   | 28.778                            | 35.087       | 40.574       | 48.214   |
| 470                     | 18.1/2            | 19.839       | 24.007   | 28.98                             | 35.323       | 40.839       | 48.518   |
| 475                     | 18.3/4            | 19.98        | 24.176   | 29.183                            | 35.559       | 41.104       | 48.822   |
| 480                     | 18.7/8            | 20.122       | 24.346   | 29.385                            | 35.795       | 41.369       | 49.127   |
| 485                     | 19                | 20.263       | 24.515   | 29.588                            | 36.031       | 41.634       | 49.431   |
| 490                     | 19.1/4            | 20.405       | 24.685   | 29.79                             | 36.267       | 41.899       | 49.736   |
| 495                     | 19.1/2            | 20.546       | 24.854   | 29.993                            | 36.503       | 42.164       | 50.04    |
| 500                     | 19.3/4            | 20.688       | 25.024   | 30.195                            | 36.739       | 42.429       | 50.344   |

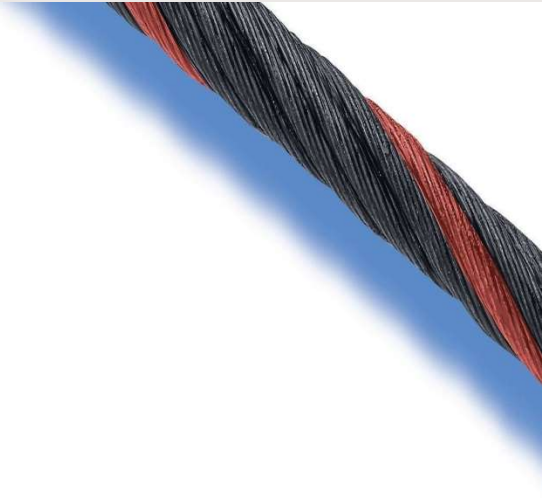


# ASHWANI IMPORTS & EXPORTS

## WIRE ROPE



**MINIMUM BREAKING FORCE AND WEIGHTS FOR  
STANDARD 6X19 AND 6X36 CLASSIFICATION ROPES**

| Diameter<br>(in.) | Approx.<br>wt./ft.<br>(lb.)                                                         | FIBER CORE                                    |      | Approx.<br>wt./ft.<br>(lb.) | IWRC                                          |      |       |
|-------------------|-------------------------------------------------------------------------------------|-----------------------------------------------|------|-----------------------------|-----------------------------------------------|------|-------|
|                   |                                                                                     | Minimum breaking force<br>(tons of 2,000 lb.) |      |                             | Minimum breaking force<br>(tons of 2,000 lb.) |      |       |
|                   |                                                                                     | IPS                                           | XIP® |                             | IPS                                           | XIP® | XXIP® |
| 3/16              | 0.059                                                                               | 1.55                                          | 1.71 |                             |                                               |      |       |
| 1/4               | 0.105                                                                               | 2.74                                          | 3.02 | 0.116                       | 2.94                                          | 3.40 |       |
| 5/16              | 0.164                                                                               | 4.26                                          | 4.69 | 0.18                        | 4.58                                          | 5.27 |       |
| 3/8               | 0.236                                                                               | 6.10                                          | 6.72 | 0.26                        | 6.56                                          | 7.55 | 8.30  |
| 7/16              | 0.32                                                                                | 8.27                                          | 9.10 | 0.35                        | 8.89                                          | 10.2 | 11.2  |
| 1/2               | 0.42                                                                                | 10.7                                          | 11.8 | 0.46                        | 11.5                                          | 13.3 | 14.6  |
| 9/16              | 0.53                                                                                | 13.5                                          | 14.9 | 0.59                        | 14.5                                          | 16.8 | 18.5  |
| 5/8               | 0.66                                                                                | 16.7                                          | 18.3 | 0.72                        | 17.9                                          | 20.6 | 22.7  |
| 3/4               | 0.95                                                                                | 23.8                                          | 26.2 | 1.04                        | 25.6                                          | 29.4 | 32.4  |
| 7/8               | 1.29                                                                                | 32.2                                          | 35.4 | 1.42                        | 34.6                                          | 39.8 | 43.8  |
| 1                 | 1.68                                                                                | 41.8                                          | 46.0 | 1.85                        | 44.9                                          | 51.7 | 56.9  |
| 1 1/8             | 2.13                                                                                | 52.6                                          | 57.8 | 2.34                        | 56.5                                          | 65.0 | 71.5  |
| 1 1/4             | 2.63                                                                                | 64.6                                          | 71.1 | 2.89                        | 69.4                                          | 79.9 | 87.9  |
| 1 3/8             | 3.18                                                                                | 77.7                                          | 85.5 | 3.50                        | 83.5                                          | 96.0 | 106   |
| 1 1/2             | 3.78                                                                                | 92.0                                          | 101  | 4.16                        | 98.9                                          | 114  | 125   |
| 1 5/8             | 4.44                                                                                | 107                                           | 118  | 4.88                        | 115                                           | 132  | 146   |
| 1 3/4             | 5.15                                                                                | 124                                           | 137  | 5.67                        | 133                                           | 153  | 169   |
| 1 7/8             | 5.91                                                                                | 141                                           | 156  | 6.50                        | 152                                           | 174  | 192   |
| 2                 | 6.72                                                                                | 160                                           | 176  | 7.39                        | 172                                           | 198  | 217   |
| 2 1/8             | 7.59                                                                                | 179                                           | 197  | 8.35                        | 192                                           | 221  | 244   |
| 2 1/4             | 8.51                                                                                | 200                                           | 220  | 9.36                        | 215                                           | 247  | 272   |
| 2 3/8             |  |                                               |      | 10.4                        | 239                                           | 274  |       |
| 2 1/2             |                                                                                     |                                               |      | 11.6                        | 262                                           | 302  |       |
| 2 5/8             |                                                                                     |                                               |      | 12.8                        | 288                                           | 331  |       |
| 2 3/4             |                                                                                     |                                               |      | 14.0                        | 314                                           | 361  |       |
| 2 7/8             |                                                                                     |                                               |      | 15.3                        | 341                                           | 392  |       |
| 3                 |                                                                                     |                                               |      | 16.6                        | 370                                           | 425  |       |
| 3 1/8             |                                                                                     |                                               |      | 18.0                        | 399                                           | 458  |       |
| 3 1/4             |                                                                                     |                                               |      | 19.5                        | 429                                           | 492  |       |
| 3 3/8             |                                                                                     |                                               |      | 21.0                        | 459                                           | 529  |       |
| 3 1/2             |                                                                                     |                                               |      | 22.7                        | 491                                           | 564  |       |
| 3 5/8             |                                                                                     |                                               |      | 24.3                        | 523                                           | 602  |       |
| 3 3/4             |                                                                                     |                                               |      | 26.0                        | 557                                           | 641  |       |
| 3 7/8             |                                                                                     |                                               |      | 27.7                        | 591                                           | 680  |       |
| 4                 |                                                                                     |                                               |      | 29.6                        | 627                                           | 720  |       |
| 4 1/8             |                                                                                     |                                               |      | 31.7                        | 658                                           | 757  |       |
| 4 1/4             |                                                                                     |                                               |      | 33.3                        | 694                                           | 799  |       |
| 4 3/8             |                                                                                     |                                               |      | 35.4                        | 734                                           | 844  |       |

Available galvanized at 10% lower strengths, or in equivalent strengths on special request.

Should not be used with a swivel.





## STUD ANCHOR – THROUGH BOLT

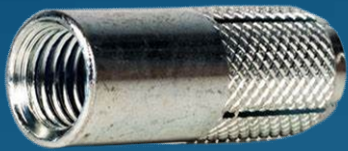


|      | M 06 | M 08 | M 10 | M 12 | M 16 | M 20 | M 24 |
|------|------|------|------|------|------|------|------|
| M 40 |      |      |      |      |      |      |      |
| M 45 |      |      |      |      |      |      |      |
| M 50 |      |      |      |      |      |      |      |
| M 60 |      |      |      |      |      |      |      |
| M 70 |      |      |      |      |      |      |      |
| M 80 |      |      |      |      |      |      |      |
| M 90 |      |      |      |      |      |      |      |
| M100 |      |      |      |      |      |      |      |
| M110 |      |      |      |      |      |      |      |
| M120 |      |      |      |      |      |      |      |
| M130 |      |      |      |      |      |      |      |
| M140 |      |      |      |      |      |      |      |
| M150 |      |      |      |      |      |      |      |
| M160 |      |      |      |      |      |      |      |
| M170 |      |      |      |      |      |      |      |
| M180 |      |      |      |      |      |      |      |
| M190 |      |      |      |      |      |      |      |
| M200 |      |      |      |      |      |      |      |
| M210 |      |      |      |      |      |      |      |
| M220 |      |      |      |      |      |      |      |
| M230 |      |      |      |      |      |      |      |
| M240 |      |      |      |      |      |      |      |
| M250 |      |      |      |      |      |      |      |
| M275 |      |      |      |      |      |      |      |
| M300 |      |      |      |      |      |      |      |
| M350 |      |      |      |      |      |      |      |
| M400 |      |      |      |      |      |      |      |
| M450 |      |      |      |      |      |      |      |

Coating : Electro Galv, Yellow, Hot Dip Galvanized  
Grade 4.8, 8.8, SS304, SS316

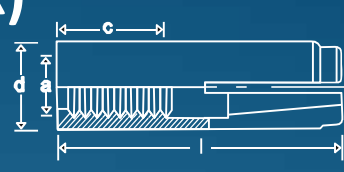


## DROP IN ANCHOR (UNIFIX)



Type A – Polish

Type B – Knurling



| Size A (mm) | Pitch | Anchor Outer Dia d (mm) | Anchor Length l (mm) | Safe Load (Kn) | Thread Depth C (mm) |
|-------------|-------|-------------------------|----------------------|----------------|---------------------|
| 06          | 1.00  | M 08                    | 25 MM                | 2.1            | 10                  |
| M 08        | 1.25  | M 10                    | 30 MM                | 2.8            | 14                  |
| M 10        | 1.50  | M 12                    | 40 MM                | 4.2            | 19                  |
| M 12        | 1.75  | M 16                    | 50 MM                | 6.2            | 22                  |
| M 16        | 2.00  | M 20                    | 65 MM                | 10.2           | 30                  |
| M 20        | 2.50  | M 25                    | 80 MM                | 15.7           | 38                  |
| M 24        | 3.00  | M 30                    | 110 MM               | 20.0           | 55                  |

Coating : Electro Galv, Yellow, Hot Dip Galvanized  
Grade 4.8, 8.8, SS304, SS316



## EXPANSION SHIELD (FIX BOLT)

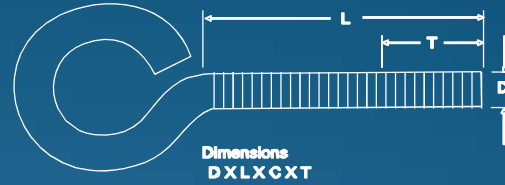
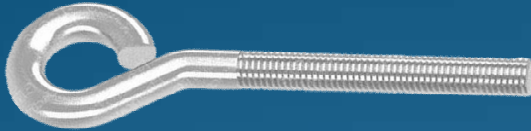


| Size A (mm) | Pitch | Anchor Outer Dia d (mm) | Anchor Length l (mm) | Safe Working Load (kn) | Recmd. Torquee for 300 N/mm <sup>2</sup> | Bolt Length (mm)          |
|-------------|-------|-------------------------|----------------------|------------------------|------------------------------------------|---------------------------|
| M 06        | 1.00  | M 12                    | 45 MM                | 3.3 2.1                | 6.5                                      | 50,60,65,80,100           |
| M 08        | 1.25  | M 14                    | 55 MM                | 4.8 4.4                | 15.0                                     | 60,65,75,90,100,120,140   |
| M 10        | 1.50  | M 16                    | 65 MM                | 6.2 6.1                | 27.0                                     | 75,90,100,120,140,150,160 |
| M 12        | 1.75  | M 20                    | 85 MM                | 9.7 12.4               | 50.0                                     | 90,100,120,140,150,170    |
| M 16        | 2.00  | M 25                    | 125 MM               | 21.3 27.6              | 120.0                                    | 180,200                   |
| M 20        | 2.50  | M 32                    | 140 MM               | 31.2 36.4              | 230.0                                    | 150,175,200,250           |
| M 24        | 3.00  | M 38                    | 160 MM               | 38.0 50.0              | 400.0                                    | 200,250,300               |

Coating : Electro Galv, Yellow, Hot Dip Galvanized  
Grade 4.8, 8.8, SS304, SS316, Brass



## EYE BOLT CLOSE AND OPEN TYPE



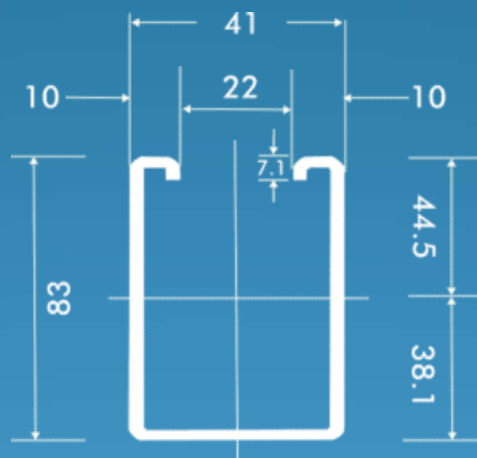
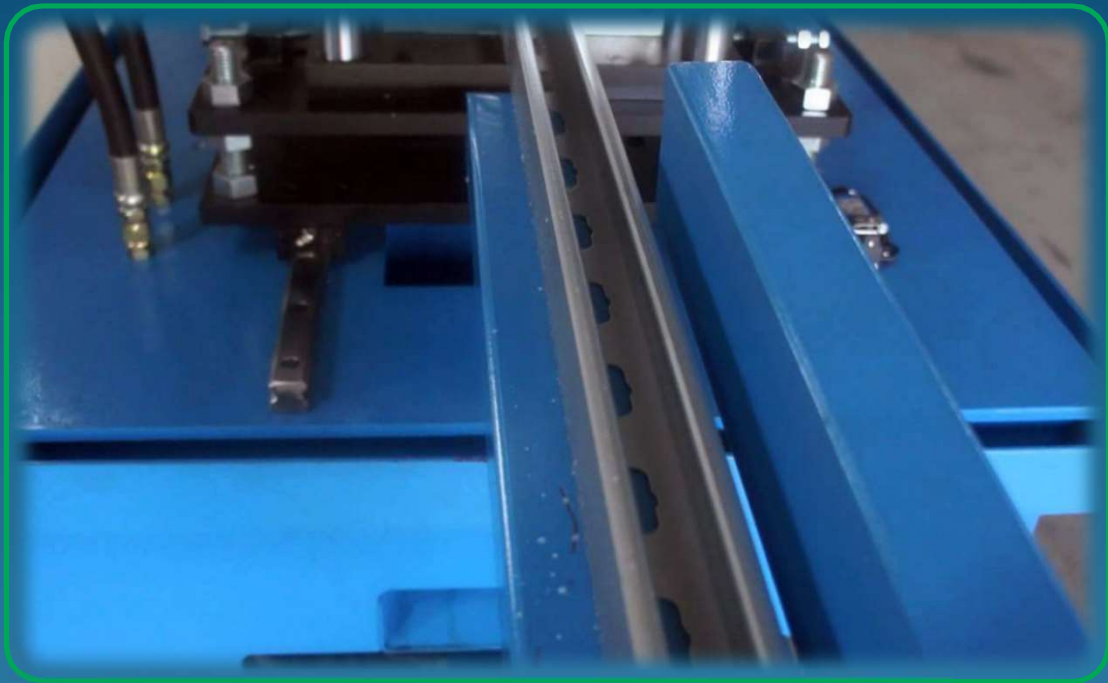
| Length | M 06 | M 08 | M 10 | M 12 |
|--------|------|------|------|------|
| M40    |      |      |      |      |
| M 45   |      |      |      |      |
| M 50   |      |      |      |      |
| M 60   |      |      |      |      |
| M 70   |      |      |      |      |
| M 80   |      |      |      |      |
| M 90   |      |      |      |      |
| M 100  |      |      |      |      |
| M 110  |      |      |      |      |
| M 120  |      |      |      |      |
| M 130  |      |      |      |      |
| M 140  |      |      |      |      |
| M 150  |      |      |      |      |
| M 200  |      |      |      |      |
| M 250  |      |      |      |      |
| M 300  |      |      |      |      |

Coating : Electro Galv, Yellow, Hot Dip Galvanized  
Grade 4.8, 8.8, SS304, SS316



# ASHWANI IMPORTS & EXPORTS

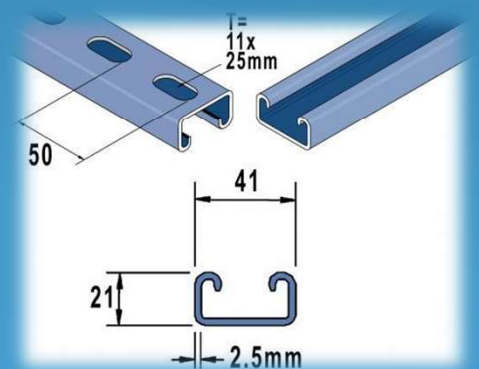
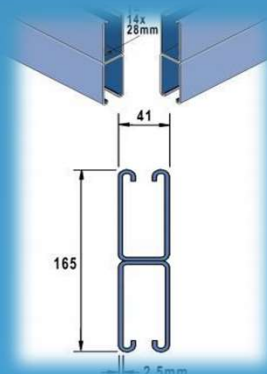
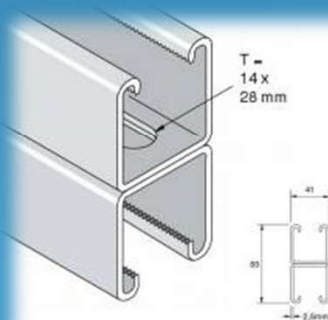
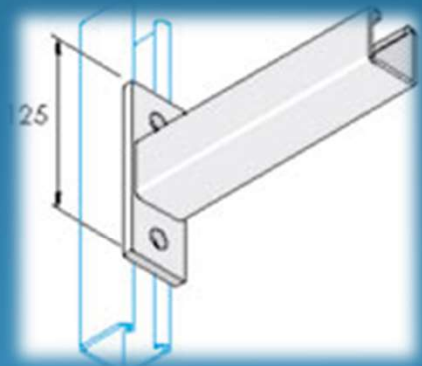
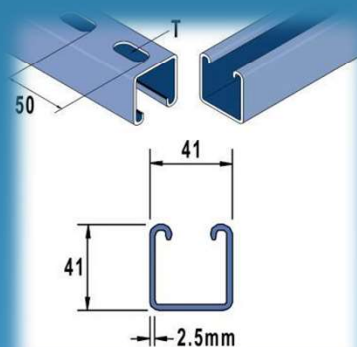
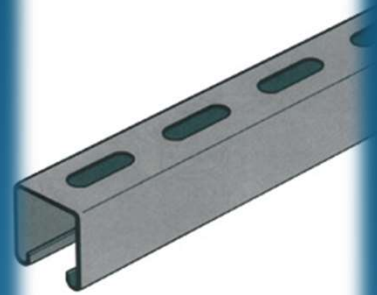
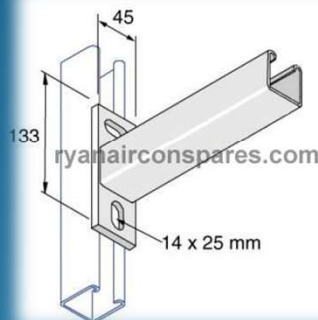
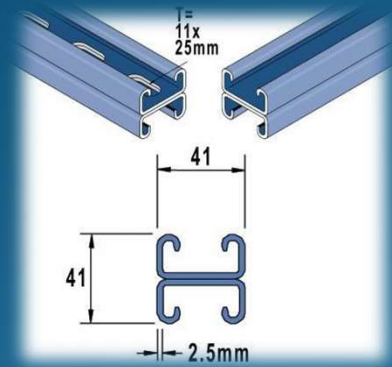
## UNISTRUCT CHANNEL





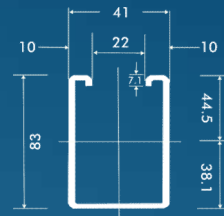
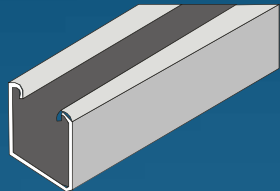


## UNISTRUCT CHANNEL





## UNISTRUT CHANNEL

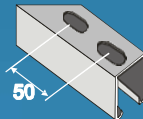


### Plaint Channel W1000T (41x41)

| SPAN OR COLUMN<br>UNSUPPORTED<br>HEIGHT IN MM | UNIFORM LOAD AT<br>175 N/MM <sup>2</sup><br>STRESS KG | DEFLECTION IN<br>MM AT<br>175 N/MM <sup>2</sup> | UNIFORM LOAD MAX.<br>DEFLEC. OF<br>1/200th SPAN KG | UNIFORM LOAD MAX.<br>DEFLEC. OF<br>1/360th SPAN KG | MAX LOAD OF<br>COLUMN LOADED<br>@ CENTROID KG. | MAX LOAD OF<br>COLUMN LOADED<br>@ SLOT FACE KG. |
|-----------------------------------------------|-------------------------------------------------------|-------------------------------------------------|----------------------------------------------------|----------------------------------------------------|------------------------------------------------|-------------------------------------------------|
| 250                                           | 1769                                                  | 0.23                                            | -                                                  | -                                                  | 5869                                           | 1693                                            |
| 500                                           | 884                                                   | 0.95                                            | -                                                  | -                                                  | 5379                                           | 1650                                            |
| 750                                           | 589                                                   | 2.15                                            | -                                                  | 571                                                | 4479                                           | 1554                                            |
| 1000                                          | 442                                                   | 3.82                                            | -                                                  | 321                                                | 3373                                           | 1395                                            |
| 1250                                          | 353                                                   | 5.97                                            | -                                                  | 205                                                | 2556                                           | 1232                                            |
| 1500                                          | 294                                                   | 8.60                                            | 257                                                | 142                                                | 2020                                           | 1093                                            |
| 1750                                          | 252                                                   | 11.70                                           | 188                                                | 104                                                | 1656                                           | 976                                             |
| 2000                                          | 221                                                   | 15.29                                           | 144                                                | 80                                                 | 1395                                           | 879                                             |
| 2250                                          | 196                                                   | 19.35                                           | 114                                                | 63                                                 | 1198                                           | 797                                             |
| 2500                                          | 176                                                   | 23.89                                           | 92                                                 | 51                                                 | 1044                                           | 725                                             |
| 2750                                          | 160                                                   | 28.91                                           | 76                                                 | 42                                                 | (919)                                          | (663)                                           |
| 3000                                          | 147                                                   | 34.40                                           | 64                                                 | 35                                                 | (816)                                          | (607)                                           |

## SLOTTED CHANNEL

### Slotted Channel W1000T (41x41)



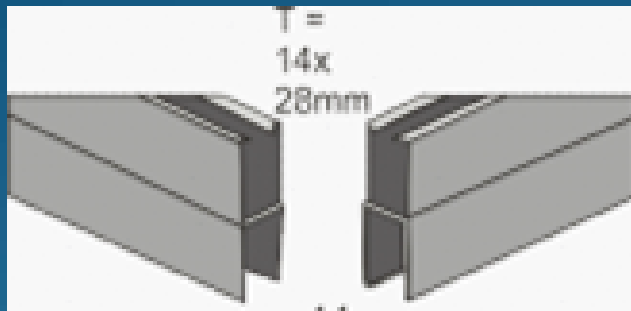
| SPAN OR COLUMN<br>UNSUPPORTED<br>HEIGHT IN MM | UNIFORM LOAD AT<br>175 N / mm <sup>2</sup><br>STRESS KG. | DEFLECTION IN<br>MM AT 175<br>N / mm <sup>2</sup> | UNIFORM LOAD MAX.<br>DEFLEC. OF<br>1/200th SPAN KG | UNIFORM LOAD MAX.<br>DEFLEC. OF<br>1/360th SPAN KG | MAX LOAD OF<br>COLUMN LOADED<br>@ CENTROID KG. | MAX LOAD OF<br>COLUMN LOADED<br>@ SLOT FACE KG. |
|-----------------------------------------------|----------------------------------------------------------|---------------------------------------------------|----------------------------------------------------|----------------------------------------------------|------------------------------------------------|-------------------------------------------------|
| 500                                           | 819                                                      | 1.05                                              | -                                                  | -                                                  | 5100                                           | 1635                                            |
| 750                                           | 546                                                      | 2.35                                              | -                                                  | 483                                                | 4412                                           | 1557                                            |
| 1000                                          | 409                                                      | 4.18                                              | -                                                  | 217                                                | 3284                                           | 1389                                            |
| 1250                                          | 327                                                      | 6.54                                              | 313                                                | 174                                                | 2436                                           | 1211                                            |
| 1500                                          | 273                                                      | 2.41                                              | 217                                                | 120                                                | 1899                                           | 1062                                            |
| 1750                                          | 234                                                      | 12.81                                             | 159                                                | 88                                                 | 1546                                           | 941                                             |
| 2000                                          | 204                                                      | 16.73                                             | 122                                                | 67                                                 | 1297                                           | 843                                             |
| 2250                                          | 182                                                      | 21.18                                             | 96                                                 | 53                                                 | 1113                                           | 761                                             |
| 2500                                          | 163                                                      | 26.15                                             | 78                                                 | 43                                                 | 970                                            | 691                                             |
| 2750                                          | 148                                                      | 31.64                                             | 64                                                 | 35                                                 | (855)                                          | (631)                                           |
| 3000                                          | 136                                                      | 37.65                                             | 54                                                 | 30                                                 | (761)                                          | (578)                                           |

| Part No | Weight | Material<br>Thickness<br>mm | Standard<br>Length | Finish      | Area of Section |      |      | Elements of<br>Section<br>AXIS - X-X |      |      | Elements of<br>Section<br>Axis Y-Y |  |  |
|---------|--------|-----------------------------|--------------------|-------------|-----------------|------|------|--------------------------------------|------|------|------------------------------------|--|--|
| W1000   | 2.88   | 1.5 TO 3.0                  | 3 Mtr 6 Mtr        | PL PG HG SS | 3.35            | 7.21 | 3.10 | 1.46                                 | 9.23 | 4.47 | 1.66                               |  |  |
| W1000T  | 2.73   | 1.5 TO 3.0                  | 3 Mtr 6 Mtr        | PL PG HG SS | 3.00            | 6.10 | 2.87 | 1.42                                 | 9.14 | 4.44 | 1.74                               |  |  |

Coating : Electro Galv, Hot Dip Galvanized  
Grade A36, SS304, SS316



## UNISTRUT CHANNEL - DOUBLE



Combination Channel (Back to Back) W 1001 ( 41 x 82 )

| SPAN OR COLUMN<br>UNSUPPORTED<br>HEIGHT IN MM | UNIFORM LOAD AT<br>175 N/MM <sup>2</sup><br>STRESS KG | DEFLECTION AT<br>175 N/MM <sup>2</sup> | UNIFORM LOAD MAX.<br>DEFLEC. OF<br>1/200 SPAN KG. | UNIFORM LOAD MAX.<br>DEFLEC. OF<br>1/360 SPAN KG. | MAX LOAD OF<br>COLUMN LOADED<br>@ CENTROID KG. |        |
|-----------------------------------------------|-------------------------------------------------------|----------------------------------------|---------------------------------------------------|---------------------------------------------------|------------------------------------------------|--------|
|                                               | -                                                     | -                                      | -                                                 | -                                                 | 11952                                          | 2880   |
| 500                                           | -                                                     | -                                      | -                                                 | -                                                 | 11682                                          | 2864   |
| 750                                           | 1670                                                  | 1.21                                   | -                                                 | -                                                 | 11186                                          | 2833   |
| 1000                                          | 1253                                                  | 2.15                                   | -                                                 | -                                                 | 10451                                          | 2783   |
| 1250                                          | 1002                                                  | 3.36                                   | -                                                 | -                                                 | 9305                                           | 2695   |
| 1500                                          | 835                                                   | 4.84                                   | -                                                 | 718                                               | 7790                                           | 2551   |
| 1750                                          | 716                                                   | 6.59                                   | -                                                 | 523                                               | 6293                                           | 2367   |
| 2000                                          | 626                                                   | 8.61                                   | -                                                 | 404                                               | 5068                                           | 2170   |
| 2250                                          | 556                                                   | 10.89                                  | -                                                 | 319                                               | 4127                                           | 1977   |
| 2500                                          | 501                                                   | 13.45                                  | 465                                               | 258                                               | 3410                                           | 1796   |
| 2750                                          | 455                                                   | 16.27                                  | 384                                               | 213                                               | 2858                                           | 1630   |
| 3000                                          | 417                                                   | 19.37                                  | 323                                               | 179                                               | (2427)                                         | (1480) |

| Part No | Weight | Material<br>Thickness | Standard<br>Length | Finish      | Area of<br>Section | Elements of Section<br>Axis X-X |                   |      |  | Elements of Section<br>Axis Y-Y |                   |      |
|---------|--------|-----------------------|--------------------|-------------|--------------------|---------------------------------|-------------------|------|--|---------------------------------|-------------------|------|
|         | Kg/m   | mm                    |                    |             | cm <sup>2</sup>    | I cm <sup>4</sup>               | Z cm <sup>3</sup> | r cm |  | I cm <sup>4</sup>               | Z cm <sup>3</sup> | r cm |
| W10001  | 5.77   | 1.5 to 3.0            | 3 Mtr 6 Mtr        | PL PG HG SS | 6.70               | 36.27                           | 8.78              | 2.32 |  | 18.46                           | 8.94              | 1.66 |

Coating : Electro Galv., Hotdip Galv.  
Grade : ASTM A36, SS304, SS316



## SLOTTED GRATING AND MAINHOLE COVERS

### AIE Cast Slot



### AIE Filcoten



Where constant, slow turning traffic is a major consideration, AIE Cast Slot wins top marks. Designed specifically to meet the needs of supermarket car parks and delivery / distribution areas, where load ratings can reach F900, AIE Cast Slot is now a trusted staple in surface water drainage specifications for these projects.

The unobtrusive profile of AIE Cast Slot sits neatly within concrete, asphalt, and block surface finishes. AIE features an electro painted ductile iron throat section, which is securely fixed to the galvanised steel channel body to provide an exceptionally robust yet discreet drainage system. A tread safe option is also available for area where there is regular foot traffic. AIE is ideal for areas of vehicular traffic such as car parks and industrial units where there is slow turning traffic. Available with a 10mm or 30mm opening.

AIE Cast Slot is ideal for areas of vehicular traffic such as car parks and industrial units where there is slow turning traffic.

#### Product categories

Products (Pr), Services distribution products, Pipe, tube and fitting products. Drainage gullies and channels, Drainage channels with gratings)

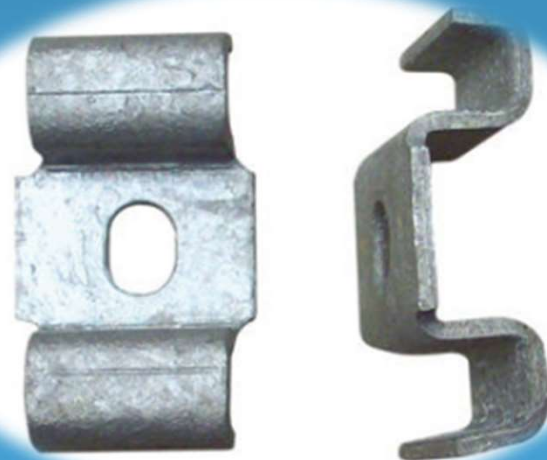
#### Specifications

100mm, 150mm, 225mm, 300mm, 350mm, 400mm, 500mm, 600mm





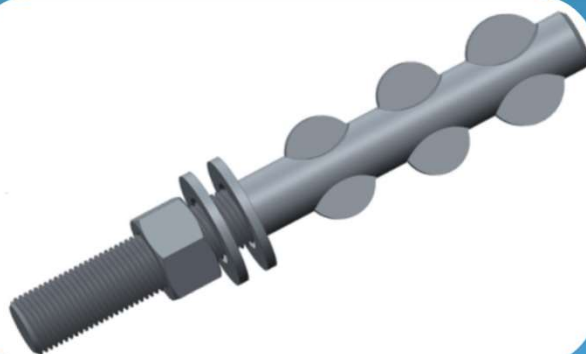
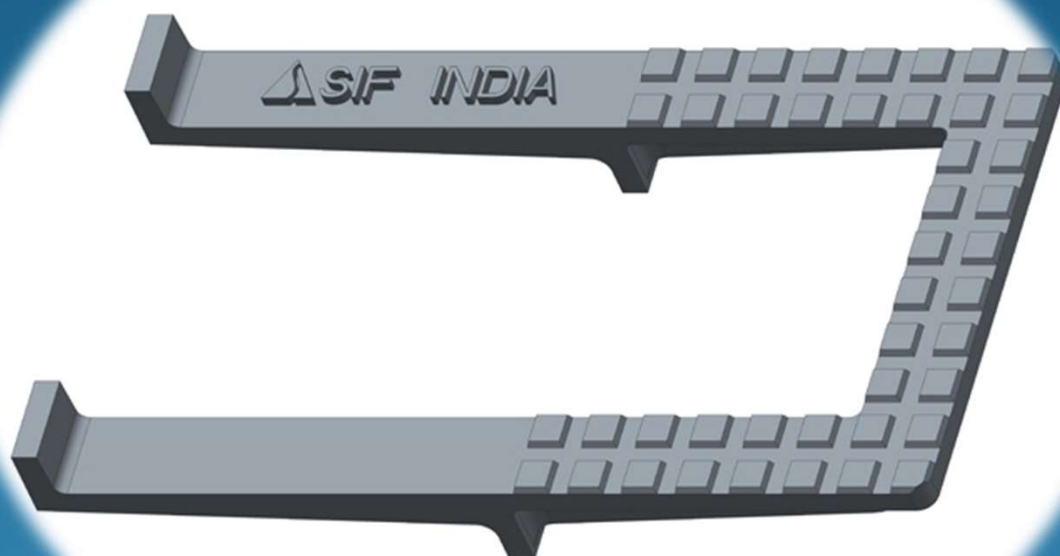
# GRATING CLAMP





ASHWANI IMPORTS & EXPORTS

## SEWRAGE ACCESSORIES





## THREAD

### RIGHT HAND BOLTS

Right Hand Bolts are bolts with a normal coarse thread and is turned clockwise instead of anticlockwise to tighten. Coarse thread is the most common designation for general application bolts and nuts. Coarse thread is beneficial, because they are less likely to cross thread, more tolerant in adverse conditions and facilitate quick assembly. Ashwani Imports & Exports can manufacture any **SIZE** with any type **THREAD** in any **MATERIAL** and **COATINGS** you need.

### LEFT HAND BOLTS

Left Hand Bolts are bolts with a reverse thread and is turned counter clockwise instead of clockwise to tighten. Used as a means to prevent bolt from coming loose in certain moving applications. Ashwani Imports & Exports can manufacture any **SIZE** with any type **THREAD** in any **MATERIAL** and **COATINGS** you need.

## Fine Thread

Fine threads won't loosen as a result of the smaller thread include and off torque. With fine thread bolts, finer adjustments are made possible as a result of the small pitch. Fine thread bolts are tapped into hard materials with greater ease. Less torque is required to develop equivalent bolt preloads. Ashwani Imports & Exports can manufacture any **SIZE** with any type **THREAD** in any **MATERIAL** and **COATINGS** you need.





# ASHWANI IMPORTS & EXPORTS

Considering the size of our economy and Our potential, manufacturing and service Industry base, there is a hug potential for Exports to grow. At a time when the country Is on a AtamaNirbharBhart Mission, one Of its goals is also to increase India's Share In the global supply chain in exports manifold.



***-Hon'ble Prime Minister Shri Narendra Modi***

-(At on interaction with Indian Missions, Export Promotion Councils  
-and stakeholders of Trade & Commerce on 6<sup>th</sup> August, 2021

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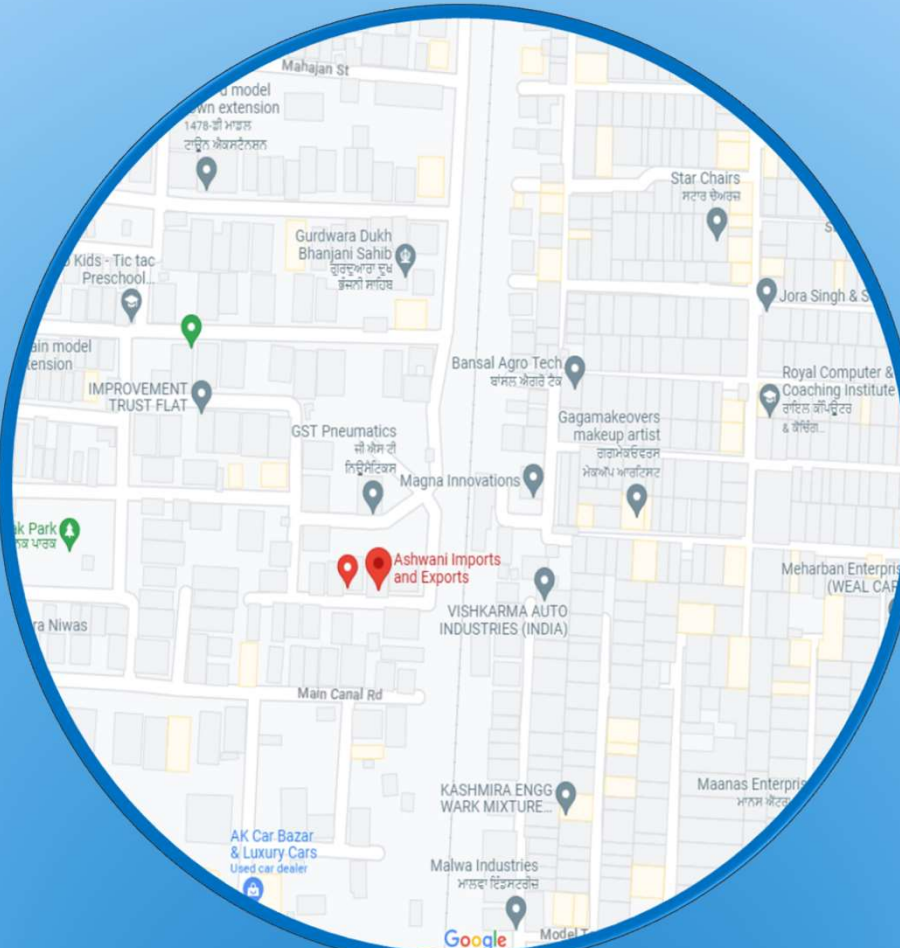
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