

IFI Report



IFI Online Technical Information – It's Here!

For several years, fastener folks have asked, "When can I get IFI technical information online?" As of May 1, 2008, this technical information is available!

The **IFI Technology Connection™** is truly a breakthrough in how fastener technical data can be accessed. This is a huge time saver when looking for fastener data. **Figure 1** compares the old way to the new way of finding needed information:

For example: Look up all data related to a typical fastener—1/2-13 x 3 Hex Head Cap Screw, SAE J429, Grade 5, Zinc Plated, ASTM F1941.

A tremendous array of technical information is available. The modules contained in the **IFI Technology Connection** are:

- Fastener Technical Data for *inch* and *metric* standards:
 - All *dimensions* including threads.
 - All *mechanical* properties applicable to the selected standard.
 - Additional mechanical data for single shear strength.
 - Reference tightening *torque* value based on the K factor of the selected finish and 75% of the yield strength based on the formula $T = KDP$ (*complete report can be printed with a single click*).
- Complete *chemistry* lookup for all fastener materials.
- Complete lookup for *test requirements* for all fastener grades.
- *Inch-Metric* Converter.
- *Hardness-Tensile* cross reference.
- *Fraction to Decimal* inch and millimeter converter.
- International fastener *material cross reference*.
- Library of dozens of IFI TechGuides.
- *Question and Answer* module addressing frequently asked questions about fasteners regarding the failure analysis, inspection, acceptance and installation.
- *Online assistance* from the IFI technical staff headed by **Joe Greenslade**, who will answer all questions *within 24 hours*.

An extensive list of standards data is immediately available. **Figure 2** (found on the second page of this article) presents the standards that are currently available within the database.

by:

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www.indfast.org



Old Way Using Paper Standards	New Way Using IFI Technology Connection
<ol style="list-style-type: none">1. Look up general dimensions, ASME B18.2.12. Look up thread dimensions, ASME B1.1, 3A high limit and 2 A low limit3. Look up hardness, proof load, and tensile strength, SAE J429, Grade 54. Look up K factor for zinc plating, IFI 7th edition5. Calculate torque using the formula $Torque = KDP$.6. Calculate single shear strength7. Write down all data.	<ol style="list-style-type: none">1. Select type of fastener from "Fastener Technical Data" page.2. Select part description from pull-down menus.3. Click "Submit". All data appears immediately!4. Press "Print".
Approximate time for those familiar with all of these standards: 15 – 30 minutes (if you can find everything you need)	Approximate time for those only vaguely familiar with fasteners: LESS than 1 Minute

Fig. 1 — Comparison of old and new information search methods.

All Standards Are Promptly Updated

It is important to know that all standards in this system are updated within 72 hours of the issuing of a revision. This is the best way available to stay current for quality audits. More **DIN** and **JIS** as well as other standards requested by users will be added in the future.

The Service Has Been Available to Non-IFI Members Since May 1, 2008

The online IFI service has been requested by the users of the *IFI Standards Book* for several years. As of May 1, 2008, the IFI has made subscriptions available for the world's most comprehensive online fastener technology resource. Every fastener user, re-seller and manufacturer should subscribe to this service to have ready access to completely up-to-date fastener technical information.

For a **FREE demonstration**, **FREE 10 day trial** or for more information on the **IFI Technology Connection**, contact **Joe Greenslade**, the IFI Director of Engineering Technology by calling +1 817 995 4685 or by sending an email to jgreenslade@indfast.org.



IFI Report ...continued

ASME B 18.6.4-1998 (R2005)	ASTM A307-2007	ISO 7051-1983
ASME B1.1-2003	ASTM A490-2008	ISO 7049-1983
ASME B18.2.1-1996 (R2005)	ASTM F593-2002	ISO 1479-1983
ASME B18.2.6-2003 (R2006)	ASTM F568M-2007	ISO 2009-1994
ASME B18.5-1998 (R2003)	ASTM F738M-2002	ISO 7046-1-1994
ASME B18.9-1996 (R2007)	ASTM A574M-2004	ISO 7046-2-1990
ASME B18.22.1-1998 (R2003)	ASTM A835M-2005	ISO 2010-1994
ASME B18.21.1-1999 (R2005)	ASTM A879M-2006	ISO 7047-1994
ASME B18.6.3-2002 (R2003)	ASTM F912M-2004	ISO 1580-1994
ANSI/ASME B18.6.3-1998 (R2003)	ASTM F880M-2002	ISO 7045-1994
ASME B 18.3-2002 (R2003)	ASTM A325M-2007	ISO 7040-1997
ASME B18.2.2-1999 (R2005)	ASTM F835-2004	ISO 7041-2002
ASME B18.3.6M-1993 (R2002)	ASTM A563-2007	ISO 4035-1999
ASME B18.3.1M-1993 (R2002)	ASTM F1941-2007	ISO 4032-1999
ASME B18.3.4M-1993 (R2002)	ASTM F1136-2007	ISO 4033-1999
ASME B18.3.5M-1993 (R2002)	ASTM F2329-2005	ISO 7089-2000
ASME B18.2.3.1M-1999 (R2005)	ASTM F1137-2006	ISO 7091-2000
ASME B18.5.2.2M-1993 (R2005)	ASTM F1428-2005	ISO 7093-2000
ASME B18.2.3.4M-1995 (R2006)	ASTM B695-2004	ISO 7092-2000
ASME B18.6.5M-1998 (R2005)	IFI 112-2007	ISO 898-1-1999
ASME B18.6.7M-1998 (R2005)	IFI 111-2002	ISO 898-2-1992
ASME B18.16.M-1998 (R2004)	IFI 100/107-2002	ISO 898-5-1998
ASME B18.2.4.5M-1990 (R2003)	IFI 101-2002	ISO 3506-2-1997
ASME B18.2.4.1M-1999 (R2007)	IFI 115-2002	ISO 2320-1997
ASME B18.2.4.2M-1995 (R2005)	IFI 145-2002	ISO 7719-1997
ASME B18.22M-1990 (R2005)	IFI 128-2000	ISO 7043-1997
ASME B18.2.3.3M (R2007)	IFI-503-2007	ISO 7044-1997
ASME B1.13M (R2005)	SAE J81-1997	ISO 8675-1999
ASTM A563-2007	SAE J995-1999	ISO 8673-1999
ASTM A194-2007	SAE J429-1999	ISO 8674-1999
ASTM F436-2007	SAE J82-1998	ISO 10512-1997
ASTM A449-2007	ISO 4026-2003	ISO 12125-1997
ASTM A325-2007	ISO 4027-2003	ISO 12126-1997
ASTM A354-2007	ISO 4028-203	ISO 10642-1997
ASTM A193-2007	ISO 4029-2003	ISO 965-1-1998
ASTM A320-2007	ISO 4762-2004	ISO 965-2-1998
ASTM F467-2006	ISO 7380-2004	ISO 965-3-1998
ASTM F468-2006	ISO 4014-1999	ISO 2702-1992
ASTM F912-2004	ISO 4017-1999	DIN 6797 A-1988/ JIS B 1255-1977
ASTM F879-2002	ISO 8678-1988	DIN 6797 J-1988/ JIS B 1255-1977
ASTM A574-2004	ISO 7411-1984	DIN 6798 V-1988/ JIS B1255-1977
ASTM F825-2004	ISO 4162-1990	DIN 6999D/ JIS B 1255-1977
ASTM F837-2002	ISO 1478-1999	DIN 127B-1987
ASTM F880-2002	ISO 7050-1983	DIN 128A-1994 & 128B-1994

Fig. 2 — Standards currently available in the *IFI Technology Connection™* database.

Field Fastener Supply is the 1st IFI Technology Connection™ Subscriber

The IFI is pleased to announce that **Field Fastener Supply Company**, based in Machesney, IL, USA, and lead by **Bill Derry**, President, continues being a fastener industry leader in innovation, technology and customer service by becoming the first subscriber to the new *IFI Technology Connection™* program. Field Fastener Supply can now quickly supply customers with inch and metric standard fastener drawings plus dimensional data, thread data, grade, hardness, tensile strength, proof load, yield strength, shear strength and recommended tightening torque in a single document. The program also enables Field Fastener Supply to assist its customers through access to the IFI's technical resources including an extensive library of technical guides and articles on a wide range of fastener related subjects. For additional assistance, Field Fastener is authorized to consult the IFI technical staff on any information not covered in the IFI web site: www.indfast.org. For more on Field Fastener Supply, visit www.fieldfastener.com.

Founded in 1931, the **Industrial Fasteners Institute (IFI)**, Independence, OH, USA, is an association of the leading North American manufacturers of bolts, nuts, screws, rivets and all types of special formed parts. Associate members include suppliers of equipment, materials and services commonly used in fastener manufacture. Whether you are a fastener maker, supplier or end-user, IFI has something of value to offer. www.indfast.org

Joe Greenslade has been active in the fastener industry since 1970. He held positions with major fastener producing firms before becoming IFI Director of Engineering Technology. jgreenslade@indfast.org
For info on becoming a Member or Associate Member of the IFI, contact **Rob Harris**, Managing Director, at +1 216 241 1482 or rharris@indfast.org.



INDUSTRIAL FASTENERS INSTITUTE

Types of IFI Technology Connection Subscriptions and Standard Terms

Standard Subscription:

The “standard subscription” is intended for an organization’s own internal use as a technical resource. Each “seat” is a unique user name and password for entering the IFI Technology Connection site. For each subscription seat only one person may enter the site at a time. The user name and password can be shared with all direct employees, but is **NOT** to be shared with vendors or customers. Subscribers may cut and paste data from the site to share with others, but direct access must not be shared.

Shared Subscription:

Subscribers to the “shared subscription” program enter the web site by using a button located **WITHIN** the secured portion of the subscriber’s web site. The subscriber must issue their customers a user name and password to enter this portion of the subscriber’s web site. Once inside the secure area employees and/or customers can enter the IFI Technology Connection by simply clicking on a single button. There is no limit on how many people can be in the web site at one time.

Standard Terms

Limited Use: *IFI Technology Connection* “standard subscription” members may share their user names and passwords with direct employees of **their own organization ONLY**. If the IFI learns or is notified of a subscriber sharing their user names and password outside their organization their subscription is subject to immediate cancellation without a refund for the remaining time on the subscriptions. Those who violate this term may be prohibited from future subscriptions to this service. Those wanting to share this service directly with their customers must subscribe to the “Shared Subscription” plan.

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Respectfully,

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21st Century Technical Data Resource

IFI Technology Connection





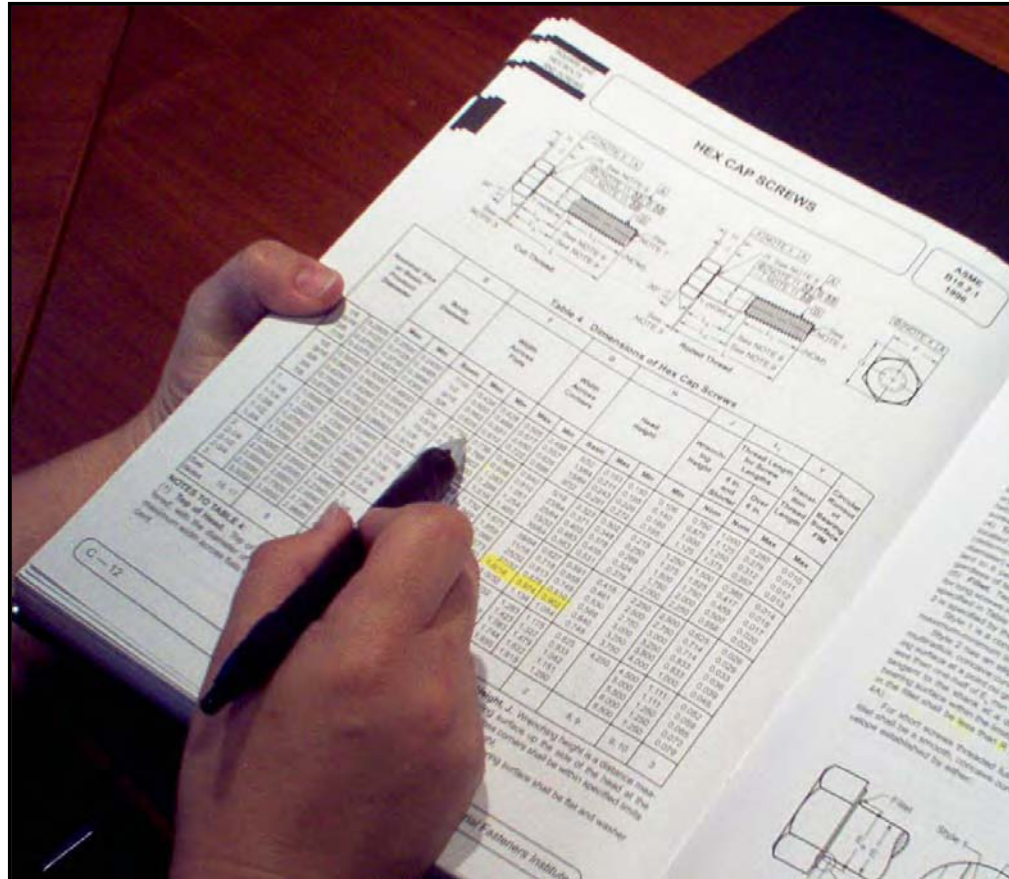
IFI Technology Connection Benefits

- Tremendous time savings – 90% faster
- Increase efficiency – easy for all to use
- Enhance professional image
- Standards are always current
- IFI technical assistance



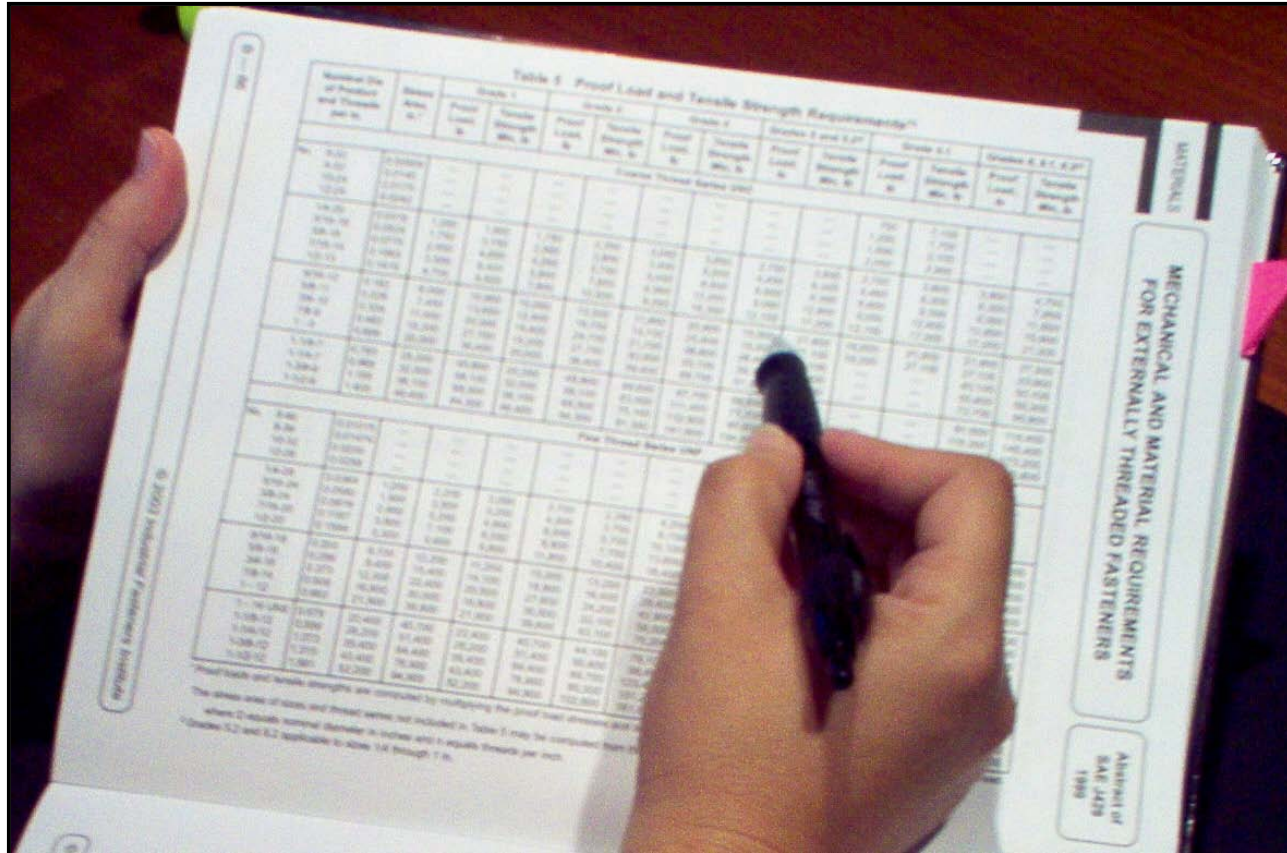
Using Standards Books

#1 Lookup General Dimensional Data





Using Standards Books #3 Lookup Mechanical Data





Using Standards Books

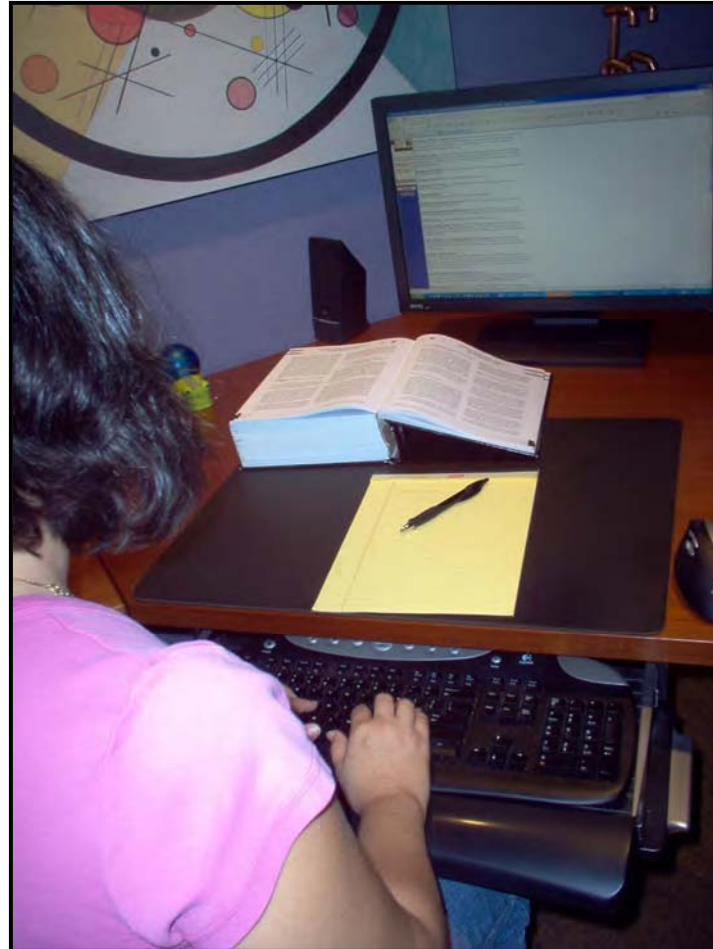
#4 Calculate Tightening Torque





Using Standards Books

#5 Type up all of the data



Fastener Quality is Critical by FIEG



Using Standards Books

- #1 look up general dimensional data
 - 2 to 5 minutes
- #2 look up thread data
 - 2 to 5 minutes
- #3 look up mechanical data
 - 2 to 5 minutes
- #4 calculate the tightening torque
 - 3 to 7 minutes
- #5 type up the results to send to a customer
 - 10 to 15 minutes
- Total time to look up the data for one part for customer
 - **9 to 22 minutes without typing**
 - **19 to 37 minutes with typing report**

Industrial Fasteners - Home - Microsoft Internet Explorer provided by PMA

http://www.indfast.org/

Google

Go

PageRank

230 blocked


Check

AutoLink

Settings

Industrial Fasteners - Home

Tools



Home

ABOUT US MEMBERSHIP PUBLICATIONS INDUSTRY INFO MEMBER'S ONLY

Upcoming Events

IFI's Annual Meeting will be held at The Ritz-Carlton Resort in Sarasota, FL March 24-27, 2007. For a more detailed list of events:

[Read More](#)

Technology Connection

The industry's most complete suite of software tools.

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Soaring Eagle Awards



The Industrial Fasteners Institute Soaring Eagle Awards Program recognizes individuals who have contributed significantly to the fastener manufacturing industry.

Welcome to our home page!!!

Founded in 1931, the Industrial Fasteners Institute is an association of the leading National American manufacturers of bolts, nuts, screws, rivets, and all types of

Done

Internet

100%

Modules and Navigation



► Welcome
Calculators & Specs
Fastener Technical Data
Chemical Requirements
Test Requirements
Inspection Sample Size
Locking Performance
Hardness Conversions
Inch/Metric Conversions
Raw Material Conversions
Fraction Conversion Tool
Weight Calculator
News & Information
Bulletin & Article Library
Technical Assistance

Fastener Selection Screen



Fastener Technical Data

Select fastener type:
INCH

Bolts & Cap Screw s

Lag Screw s

Nuts (Non-Locking)

Nuts (Locking)

Machine Screw s

Tapping Screw s

Sockets

Washers

METRIC

Bolts & Cap Screw s

Nuts (Non-Locking)

Nuts (Locking)

Washers

Machine Screw s

Tapping Screw s

Socket Set Screw s

Socket Screw s

Fastener Description Screen



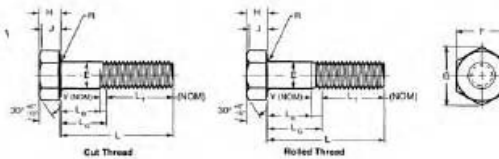
► Fastener Technical Data

Hex Cap Screw

Select from the drop down lists below and click "Submit" to calculate specifications pertaining to your bolt or cap screw.

DIAGRAM:

Click image to view



GRADE MARK:

Select Fastener Standard —

Size & TPI

1/2" - 13 threads/in.

Thread Class

2A Plated

Exact Length

3

Grade

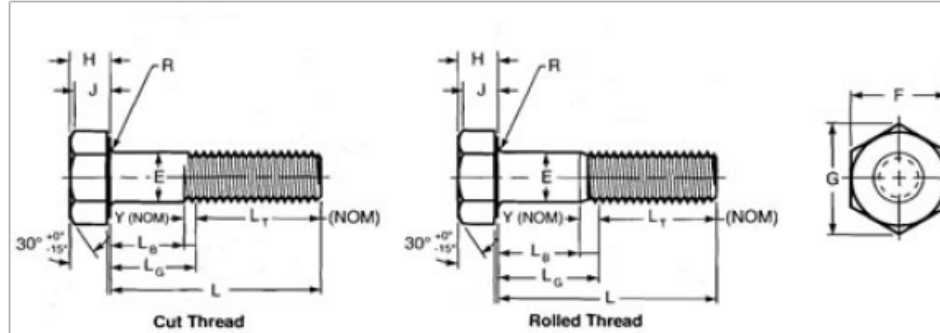
SAE J429-1999, Grade 5

Finish

Zinc & Clear (cr+6)

Submit

ITC Output Screen



Thread Data

1/2	13	0.5000 - 0.4876	0.4500 - 0.4435
THE SIZE	THREAD PER INCH	MAJOR DIAMETER	PITCH & FUNCTIONAL DIAMETER
0.1419	UNC	2A Plated	3 in.
TENSILE STRESS AREA	DESIGNATION	CLASS	LENGTH

Mechanical Data

medium carbon steel, 1028 through 1055	SAE J429-1999 Grade 5	HRC 34 - 25	12,100
TYPICAL MATERIALS	STANDARD & GRADE	HARDNESS	PROOF LOAD (LB.)
17,000	10,200	8,500	90 1,077 121.7
TENSILE STRENGTH MINIMUM (LB.)	SHEAR STRENGTH REF. - BODY (LB.)	SHEAR STRENGTH REF. - THREAD (LB.)	TIGHTENING TORQUE ¹ ft. lb. in. lb. Nm

Other Dimensional Data

Hex Cap Screw	ASME B18.2.1-1996 (R2005)	0.750 - 0.736	0.866 - 0.840
TYPE	STANDARD	WIDTH ACROSS FLATS	WIDTH ACROSS CORNERS
0.323 - 0.302	0.500	0.5000 - 0.4930	1.75/1.36
HEAD HEIGHT	NOMINAL DIAMETER	BODY DIAMETER	LG MAX./LB MIN.
0.025 - 0.015	0.215	1.250	0.385
FILLET RADIUS	WRENCHING HEIGHT	THREAD LENGTH	TRANSITION THREAD LENGTH MAX
-0.08	Chamfered	0.018	
LENGTH TOLERANCE	POINT TYPE	STRAIGHTNESS FACTOR	

Plating Data

Zinc & Clear (cr+6)	ASTM F1941-2007, Zn/Fe 3A
PLATING	PLATING STANDARD

Using the IFI Technology Connection

- Go to web site in “favorites” and login
 - 30 to 60 seconds
- Click on “Fastener Technical Data link”
 - 2 to 5 seconds
- Select fastener type from pull down menu
 - 3 to 5 seconds
- Describe part using pull down menu and click “Submit”
 - 5 to 10 seconds
- Copy data from screen and paste into WORD document.
 - 20 to 60 seconds
- Total time required
 - **1 to 2.5 minutes**



Retrieve data at warp-speed!



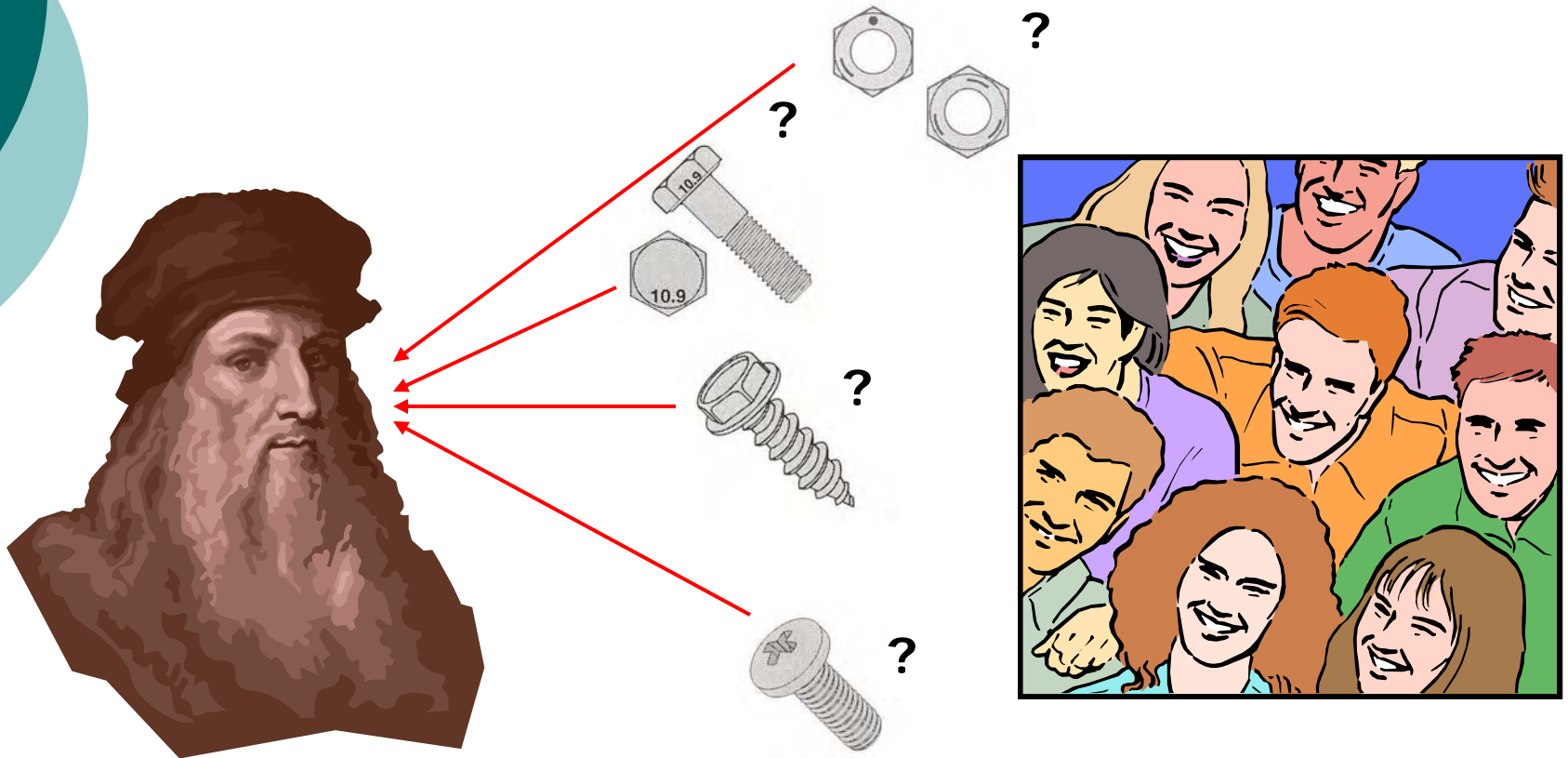
Verses



9-37 minutes

1-2.5 minutes

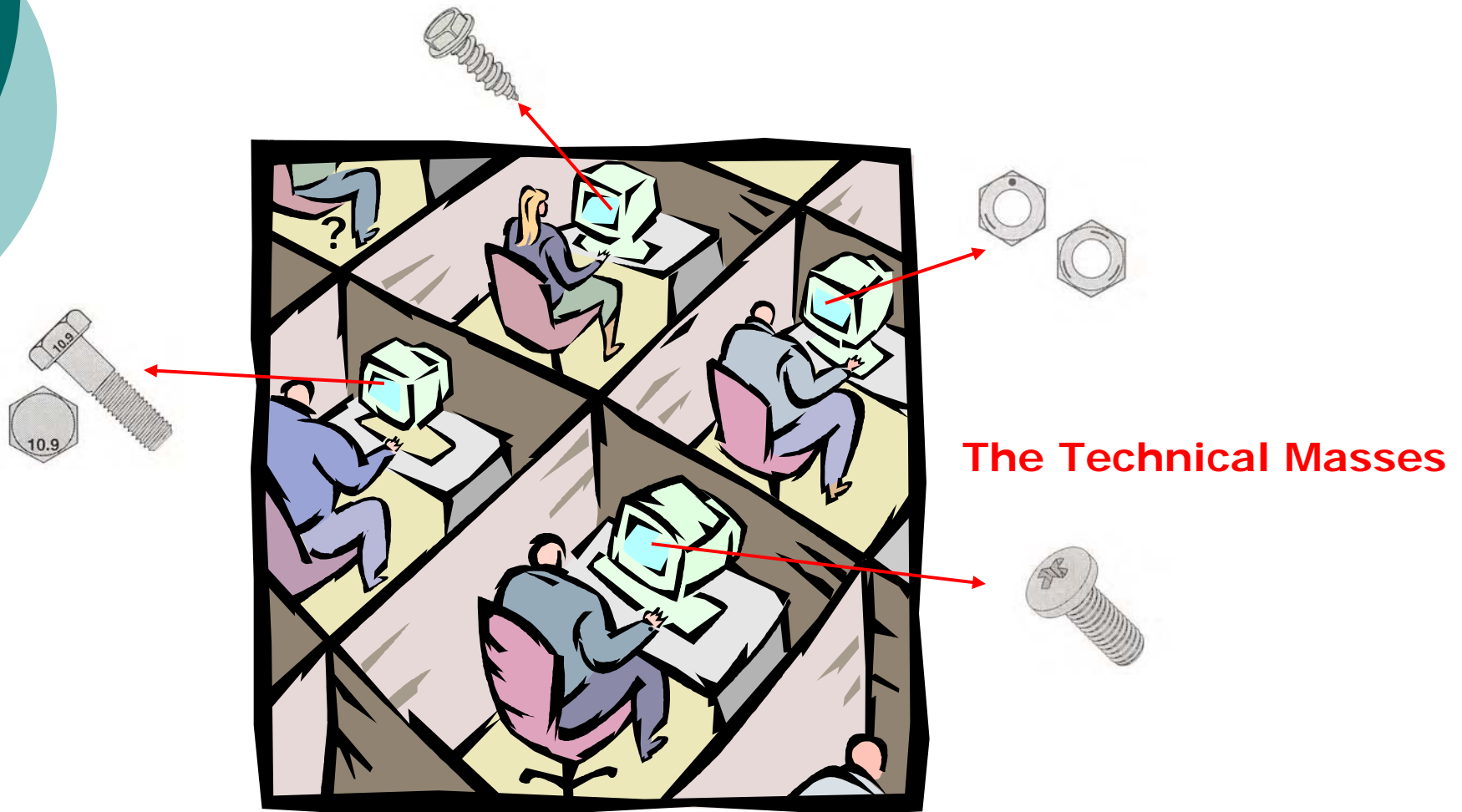
Increase efficiency – eliminate interruptions and bottlenecks



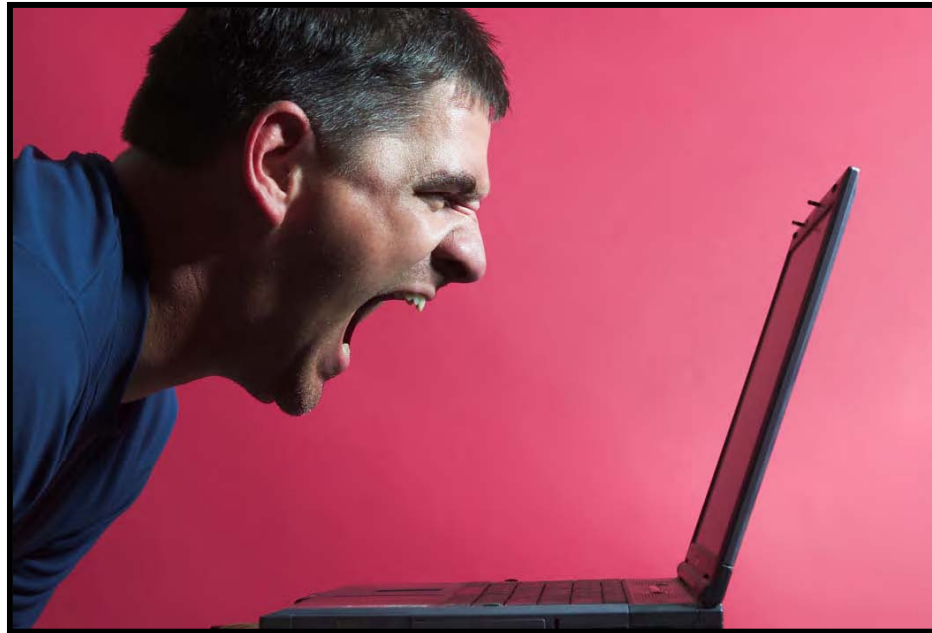
The internal Fastener Guru

The non-technical masses

Increase efficiency – enable every sales person to be technically self-sufficient



Customers do not like to wait for answers



When am I going to get that answer?

Enhance your image – Impress your customers with prompt, accurate answers



Thanks! I'll be back.

Keep data up to date!



Updated on average every 12 years.

Verses



Updated continuously!

IFI technical Assistance

- Standards assistance
- Quality assistance
- Applications assistance



Joe Greenslade
IFI Director of Engineering

What does a leading fastener distributor say about the IFI Technology Connection?

The IFI Technology Connection is a great value. In less than one month it has:

- *made technical information more readily available*
- *improved our efficiency by enabling more staff to access technical data for themselves*
- *assisted in expediting the quote process*
- *contributed to the image we project to our customers.*

Bill Derry, President, Field Fastener Supply Company



Subscribe today to start increasing your efficiency and enhancing your image!



Industrial Fasteners Institute

www.indfast.org techinfo@indfast.org 216-241-1482



IFI Technology Connection



- Standard Subscription (internal use)
 - First seat - \$2000
 - Additional seats - \$1500

- Shared Subscription (available to customers)
 - Up-front \$5000
 - \$5 per entry
 - Annual maximum - \$20,000

IFI Technology Connection



- For more information send e-mail to:

techinfo@indfast.org

