

### Please specify "freight collect" on all shipments

Reminder! According to IAC Terms and Conditions, factory orders are net 30 days, FOB origin (Brea) with all shipments freight collect or third-party billing. You will find our Terms and Conditions on page A13 in the master catalog.

### Verify set-up charges before quoting – they have changed

The pricing structure for assembly charges on workbenches and workstations has changed. They vary depending on product quantities and order configuration.

Thus, we ask you to contact the factory before quoting an estimate for set-up charges to your customer so there won't be any surprises when the order is placed.

### The ABCs of Workstation Solutions

IAC's master catalog is organized in sections by product line to help you find what you need quickly. Two examples:

**B Replacement worksurfaces for Dimension 4.** If you need to order a D4 replacement worksurface, you will find single-sided and double-sided worksurfaces, in both standard and ESD laminates, as well as the required assembly components, listed separately on pages B29-30. Please

### How low can you go?

Height-adjustable D4 worksurfaces do not have a specific starting point, due to the possibility of infinite vertical positioning within the groove of D4 uprights. However, the *lowest* possible starting height is 26 inches. For more guidance on height range requirements when specifying height-adjustable Dimension 4, please consult with the factory or a Sales Area Manager.

### Credit delays?

When working on an order with a new customer, get a "head start" on the credit check by submitting the customer's name, address, and whether they are a division or subsidiary of a larger corporation to the factory. We can begin the initial credit check while you're working through the quotation phase.

don't forget to specify a laminate color with your order!

**G Gravity Feed Racks.** You will not find the product formerly known as the D4 Gravity Feed Rack in the D4 section (B) of the catalog. Please refer instead to pages G13-14 in the Material Handling section, where you will find IAC's new Gravity Feed Rack with all-welded side frames, plus optional conveyor shelving, product feed dividers, and caster wheel sets.

Then as soon as possible, especially if it is a Quick Ship order, submit the completed credit application so the order won't be delayed while the credit application is researched and approved.

### The devil's in the details!

When you receive an order verification from us, *please* take a moment to review it carefully for accuracy. Are all the Ts crossed and Is dotted? Did we forget anything?

We try to get it right, but may not always catch potential problems. In other words, you quoted it – you're most familiar with it – you're in the best position to make sure it's correct.

### Chair discontinuation

HAG is discontinuing the TRIAD Series chair effective June 1, 2001. We are currently looking for a replacement product line, and will still continue to provide Sit On It chairs.

### Employee of the Month

#### February 2001

#### Sarah Kinney, Accounting

Sarah consistently strives for excellence and has proven herself to be a valuable contributor to the IAC team.

#### March 2001

#### Jesus Felix, Assembly

Jesus is reliable, won last year's perfect attendance award, and never has to be reminded to wear his safety equipment.

### In This Issue:

- Custom Laboratories Built From the Ground Up
- Industrial Workplace Carpal Tunnel Injuries
- The ABCs of Workstation Solutions
- Product Pointers
- This Year's Trade Shows

May 2001

### Application Story

#### Integrated Micromachines Inc. (IMMI) Gets Organized in Four New Custom-Designed Laboratories



The proprietary products on which fast growing Integrated Micromachines Inc. (IMMI) has pinned its future include some very complex and sophisticated optical components for high bandwidth fiber-optic transmission systems. The company's original product line of highly evolved pressure sensors received a "Product of the Year" Award from *EE Product News* last year.

IMMI has successfully transitioned from its original concentration on micro-electro-mechanical systems (MEMS) R&D in the early 1990s to a manufacturing company operating in one of today's hottest high-tech fields,

always focused on selecting the best materials and processes available while building both an infrastructure and its product line. This approach also applies to the design of more than 25,000 sq.ft. of laboratory space for manufacturing assembly, reliability/environmental testing, analytical testing, MEMS production, and product engineering.

IMMI selected D4 workstations, mobile cabinets, and an impressive array of productivity accessories to outfit four new laboratories, each one built literally from the ground up to occupy designated space in a new 80,000 sq. ft. building in Monrovia, Calif. Since moving into their new

### Ergonomics

#### IAC's Dr. Joy Ebben Addresses Carpal Tunnel Syndrome

In the April issue of *Occupational Health & Safety* magazine, an article authored by Dr.

Joy Ebben discusses symptoms, causes, and treatment for carpal tunnel injuries suffered in the industrial workplace.

In "It's Not Just with Keyboards," Dr. Ebben relates how long scars on the wrists of a bellhop helping with her luggage led her to surmise correctly that he had undergone carpal tunnel surgery. He had incurred his injuries on an assembly line job, where although the parts he handled were not heavy, he used physical force to snap them into place at a work pace set by a conveyor belt. Thus, the job involved repetitive forces and awkward postures – thought to be among the major contributors to carpal tunnel syndrome (CTS) injuries.

As Dr. Ebben's article explains, CTS is a nerve entrapment disorder that takes its name from the "carpal" bones of the wrist. The tendons that control finger flexion and the median nerve,



**Application Story, continued**

building earlier this year, the company continues to order D4 workstations and accessories, plus Isles "Quick Ship" workbenches to configure its expanding assembly and production test areas.

The project, says IAC Sales Application Manager Dave Verrill, is an excellent example of how customer/manufacturer relationships developed over time are a sure foundation on which to build future sales. "We got this project based on a good job done years ago for another company by IAC rep Gary Schmidt in Milwaukee. The consultant IMMI hired to design their new labs previously had a good experience working with IAC."

**Specific engineering functions now located in the same area**

"A place for everything and everything in its place" is not how Dawn Garcia-Nunez, then manager of IMMI's Product Development lab, would have described the work area for which she was responsible a couple of months ago. "People would grab any work space they could, so that the testing and other equipment they used would be scattered around without regard to who needed it next. Not very efficient," she says.

Garcia-Nunez was also familiar with Dimension 4 workstations, and knew they offered the configuration flexibility she was looking for. She had two goals – to make each lab an efficient and productive space for its assigned purpose, and to have everything pre-assembled to minimize shutdown time while they moved into the new building. She worked closely with Dave Verrill and with Sterling Sales' Delia Orvananos to customize each lab to fit the space allotted for it. No detail was overlooked – from ESD control to wire



*Dawn Garcia-Nunez of Integrated Micromachines, Inc.*

*Below – Two Uses for IAC Rolling Carts – at left, equipped with a fume extraction system to serve as a mobile soldering station; on the right, extra work surface for taking notes or staging tools next to a workstation.*



management and an integrated Power Distribution System that includes extra electrical outlets at every station. Rick Lorenzini and Mike Reading, also with Sterling Sales, installed all of the equipment. Everything was so organized, says Garcia-Nunez proudly, they lost just two days during the move.

Each floor plan uses standard D4 in various sizes combined with customized corner units. The four labs are organized according to engineering functions – product development, analytical, electronics, and the 3D product line. In the product development lab, the largest, functional groups are situated together in U-shaped "cells" that make it easy for everyone to share equipment and work together. Two IAC Rolling Carts equipped with fume extraction systems serve this lab

as unique mobile soldering stations.

Workstations have Kimwipe and tool holders, CRT/keyboard platforms, and other productivity accessories to keep work surfaces free of clutter. Operators can access even more work area if they need it – the tops of mobile cabinets pulled from under the work surface provide extra writing or assembly space. Tools are stored inside each cabinet. ESD grounding wires, the electrical system, and compressed air tubing are all hidden beneath the work surface, using an abundance of grommets cutouts in uprights and work surfaces. The result is a clean, organized look that IMMI managers take pride in showing off to visitors.

**IAC's Top Catalog Distributor for 2000**



*Andrew Celwyn and Kelly Waterloo of McMaster Carr Supply Company (Chicago, Ill.) accepted their sales award plaque from IAC's Jerry Sinner at the ProMat show in February.*

**Carpal Tunnel, continued**

one of three nerves that transmit motor and sensory impulses from the hand to the central nervous system, pass through a tunnel formed in each wrist. Compression of this nerve causes the numbness, tingling and discomfort that are the symptoms of CTS.



*Area of the hands innervated by the median nerve*

In the following excerpt from her article, Dr. Ebben offers specific recommendations for eliminating or reducing CTS risks factors in an industrial workplace:

"A few workstation design characteristics can have a significant impact on reducing the risks of CTS during high repetition of awkward postures, especially when exerting force.

- Provide the correct working height for repetitive task performance. Having the work surface height either too high or too low can lead to the selection of an awkward posture of the wrist while performing tasks.
- Angle parts cups so when parts are repeatedly retrieved, the wrist is allowed to stay in a neutral posture.

**IAC Industries 2001 Trade Show Schedule**

**ATEXpo 2001**

Rosemont, Ill., October 2-4, Booth # 15131

**Human Factors and Ergonomics Society (HFES)**

Minneapolis, October 8-12, Booth # 201

**National Ergonomics Conference and Exposition (ErgoExpo)**

Las Vegas, December 11-13, Booth # 521

• Provide features so assemblies can be easily positioned to allow repetitive forceful job tasks to be performed with neutral wrist postures and less force.

• Provide holding fixtures so parts do not have to be held in place when being worked on, reducing force and awkward postures.

• Provide appropriate lighting to make product inspection possible without having to manually manipulate a surface, reducing force and awkward wrist postures."

The good news is that workers comp, lost workdays, and other costs related to CTS – one of the more expensive illnesses in the workplace – seem to be declining. The trade magazine *CTD News* reported a 45% decrease in CTS direct costs from 1996 (\$4,764 per case) to 1998 (\$2,126 per case) in industry and office environments.

"CTS is often preventable," Dr. Ebben sums up. "Try to keep your wrists in a neutral posture, use tools and techniques that minimize required force, have a proper working surface height, design and arrange your work space to minimize the CTS risk factors, and make sure to have enough breaks to have sufficient recovery time."

The article addresses CTS causes and prevention in detail. If you have a customer with an interest in this particular workplace injury, look for the complete article in the April issue of *Occupational Health & Safety*.

**Update Your Rolodex**

Dr. Joy Ebben, IAC's Human Factors & Ergonomics Specialist has moved:

Joy M. Ebben, PhD, CPE, CHFEP, DABPS  
8699 Musky Point Circle  
Tomahawk, WI 54487  
phone: 715-282-7617  
fax: 715-282-7618  
e-mail: phdjoy@aol.com,  
jebben@iacindustries.com

**New Sales/Marketing Asst.**

Renee House has been promoted into a new position at IAC. As sales/marketing assistant (formerly a part-time position, now full-time) Renee is responsible for fulfilling product literature requests, maintaining sales literature inventories, and keeping dealers and reps supplied with forms, price lists and promotional materials.

Since 1996 Renee has been the cheerful and familiar voice of IAC, as telephone operator and receptionist. Her new extension is 213.

**Kudos from Customers**

The extra effort IAC devotes to packing orders for shipping was appreciated by SCI Technologies, Inc. (Bozeman, Mont.) After taking delivery of two workstations procured through distributor Jensen Tools last fall, a company representative wrote:

"I had to write and say 'thank you' ... Everything was well protected in individual boxes, labeled with instructions for the shipping company not to stack anything on top, and each box had its own packing slip. ...

"While furnishing our new building, I have learned not to take such things for granted. ... Your time, effort, and cost did not go unnoticed or unappreciated!"