

# Healthy Work Environment

*The Term “Ergonomics” can Simply be Defined as the Study of Work*

## Ergonomics

Ergonomics helps adapt the job to the person, rather than forcing the person to fit the job. Adapting the job to fit the worker can help reduce ergonomic stress and eliminate many potential ergonomic disorders. The objective of ergonomics is to adapt the job and workplace to the worker by designing tasks, work stations, tools and equipment that are within the worker's physical capabilities and limitations. Major causes of many current ergonomic problems are technological advances such as more specialized tasks, higher assembly line speeds, and increased repetition, plus a lack of ergonomically designed technologies. Consequently,

worker's hands, wrists, arms, shoulders, backs and legs may be subjected to thousands of repetitive twisting, forceful or flexing motions during a typical workday. In many instances, some machine tools and work environment are often poorly designed, placing undue stress on the worker's tendons, muscles and nerves. Recognizing ergonomic hazards in the workplace is the essential first step in correcting the hazards and improving worker protection. The proper Dynabrade tool and work environment can help reduce the contributing factors associated with cumulative trauma disorders.

## Dynabrade Tools Meet the Following High Quality Standards

Ergonomics and operator comfort have worked their way into each Dynabrade air tool design. Factors including, vacuum, vibration, insulation and noise (VVIN) are addressed at every integral design stage. VVIN is now critical to our research and development of new products as we continue to meet the challenging needs of the market place.

### Vacuum

Airborne sanding particles can cause severe inflammation of the eyes and lung tissue, varying on the degree of exposure and the type of airborne contaminants involved. It is because of this danger that Dynabrade manufactures self-generated and central vacuum tools that direct airborne sanding particles away from the operator and the air motor, reducing contamination and the cause of risk to the operator.



### Vibration

All hand-held machines transmit vibration to an operator's hand while in operation. Operators that work with vibrating machines for extended periods of time risk many types of injury. The most common are vascular injury, nerve injury, skeletal injury and joint injury. To help reduce vibration, we have built-in features such as composite housings and rubber overmolds, plus superiorly balanced motors and shafts. In addition, Dynabrade premium Sanding Pads are manufactured with unique one-piece hub assembly, ensuring lower vibration levels.

### Insulation

Cold caused by pneumatic powered tools can cause a variety of work related injuries. Dynabrade manufactures a variety of tools with thermal-insulated housings that help prevent cold temperature transmission to the operator, reducing the risk of white finger disease and other related injuries.



### Noise

High sound levels over an extended period of time can damage hearing. New enhancements to muffling systems, exhaust overhose protection and other tool design factors further reduce tool sound levels in the workplace.

### Properly Designed Tool

An example of how a properly designed tool assists in reducing work injuries is Dynabrade's 7° Offset, Gearless Front Exhaust Die Grinder:

- Lightweight composite housing with anti-slip ring reduces cold air transmission to operator's hand.
- Handle is offset 7° for greater operator comfort and control.
- Gearless design reduces vibration.
- Smaller collet design reduces excessive run-out and reduces vibration.
- Low profile for greater operator control to work in hard to reach areas.



### Unique Vacuum Design

Anti-clog design enhances vacuum pick-up and directs dust away from the air motor. Ask about our self-contained dust collection systems and vacuum shrouds.



### Less Vibration

Composite base and integrated rubber over-mold create a non-slip feel and insulate from cold air.

### Insulated Handle

Helps insulate from cold air... now standard on most tools.



### Low Sound Levels

Rear exhaust muffler standard on many models.

### Optional Overhose Assembly

May be used to further reduce noise levels by as much as 5 dB(A). Overhose redirects exhaust away from operator and workpiece.

