Fluid Power Town Hall 12/3/25

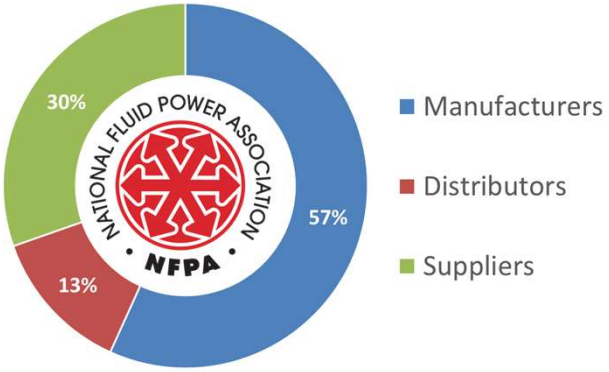
The National Fluid Power Association (NFPA) is a trade association focused on strengthening the hydraulics and pneumatics industry.

With more than 300 fluid power companies in its membership, NFPA works to advance fluid power education, technology and the industry as a whole.

- As an association, the NFPA focuses on four key areas:
  - Conduct events where our members can connect with each other, and with their customer OEM's
  - Provide data reports to help improve decision-making.
  - Promote the unique advantages of fluid power technology.
  - Build an educated workforce.

About NFPA

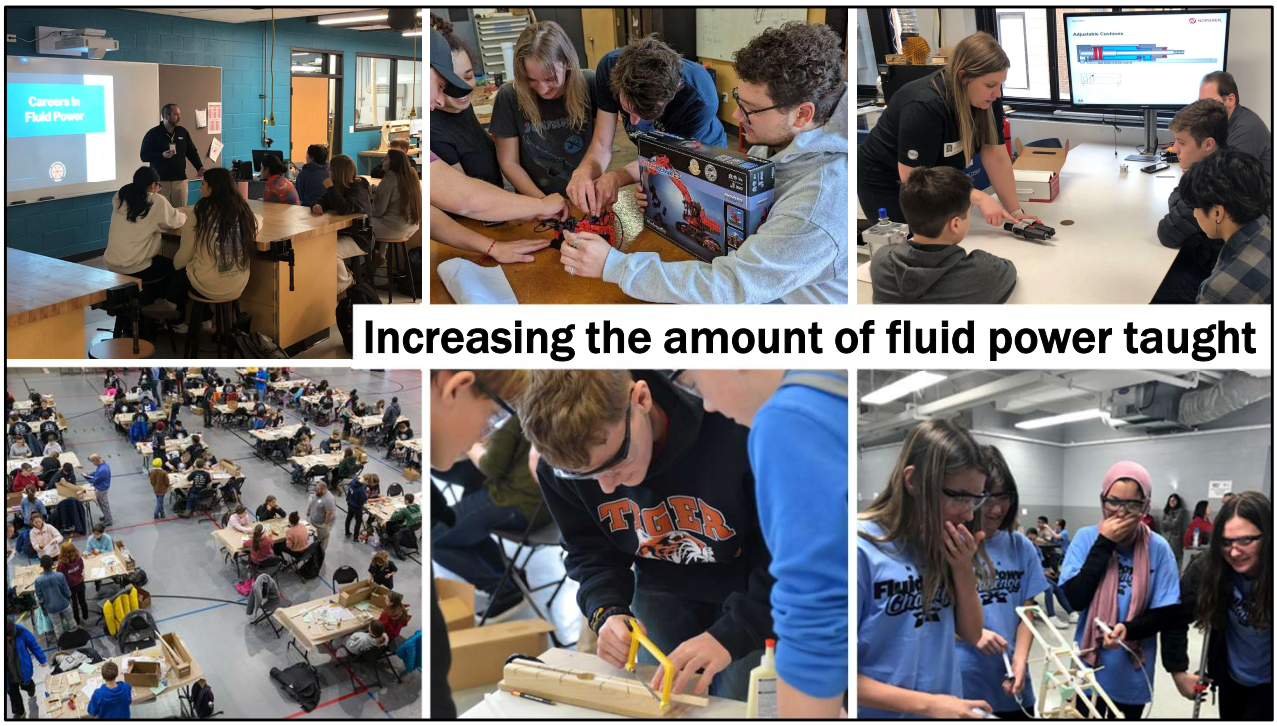
- **NFPA members represent the entire fluid power supply chain, represented in the graph on the right. NFPA members are:**
  - **Manufacturers** who design, manufacture and sell fluid power components
  - **Distributors** who build and sell systems comprised of those components
  - **Suppliers** who provide raw materials and other services needed to make those components



Building an Educated Workforce

NFPA
Education and
Technology
Foundation

Increasing the number of technical college and university students educated in fluid power and connecting them to careers in our industry.

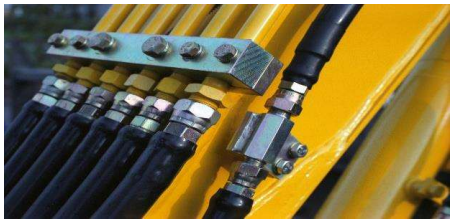


NFPA members consistently rank recruiting employees as one of the most challenging issues their companies face. As a part of its foundation initiatives, NFPA offer grants, scholarships, design/build competitions, and career exploration programs that are designed to support students and teachers in developing or enhancing the educational experience involving fluid power. NFPA pathway programs begin with middle school, onto high school and up through 2-year and 4-year college tracks.

- NFPA hosts recruiting events, and coordinates industry speaker's during the academic year to present to classes, student organizations, or community organizations.
- NFPA conducts the Vehicle Challenge which is a one-of-a-kind competition for engineering students where they are challenged to redesign and build a bicycle that relies on a fluid power circuit for its propulsion. 32 Universities are expected to compete this year.
- NFPA programs open educational opportunities and career prospects for students.

Fluid Power is a Workhorse of the U.S. Economy

Fluid power systems transmit more power in a smaller space than other forms of power transmission, making it the cross-cutting technology of choice for dozens of industries and hundreds of applications.



Advantages of **hydraulics** include:
- High power to weight ratio
- High torque at low speed
- Ability to hold torque constant
- Ruggedness and reliability

Advantages of **pneumatics** include:
- Inexpensive and lightweight
- Simple control systems
- Clean and non-reactive in magnetic environments
- Speed and precision

- Fluid power is a term that describes two related technologies: hydraulics and pneumatics.
- Both technologies use a fluid – either a liquid or a gas – to transform power into controlled motion.

Fluid Power is Everywhere

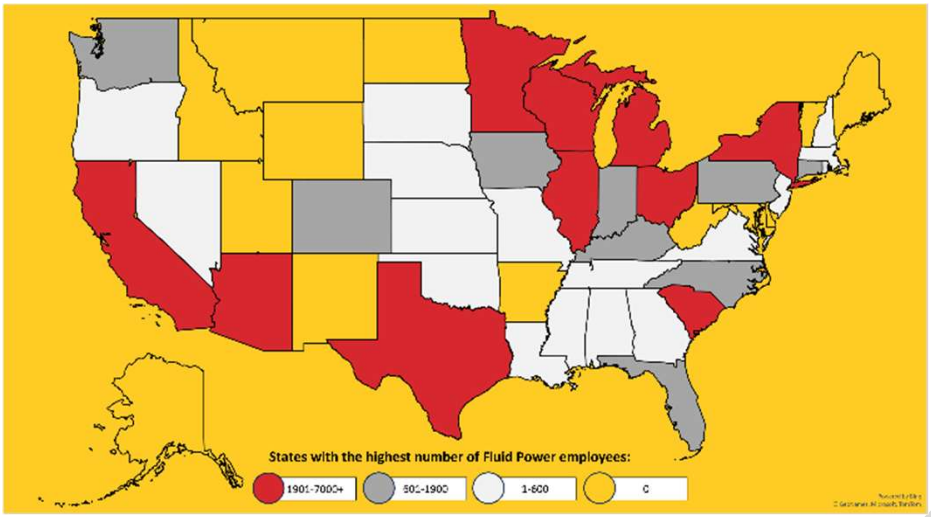
See more examples with #onlyfluidpowercan

Because of its unique capabilities, fluid power is everywhere once you know where to look. This technology impacts nearly every aspect of life:

Aerospace: it steers fighter planes, and guides rockets.
Energy: it harvests the power from the wind and waves.
Construction & Mining: it builds roads, structures, and even moves mountains.
Transportation: it makes vehicles easier to steer, stop, and provide the regenerative power to boost fuel efficiency
Entertainment: it animates our amusement parks, bringing rides and movie monsters to life.
Agriculture: it plants and harvests the crops that feed the world.
Food Processing: it keeps production lines clean, fast, and safe.
Biomedical: it can precisely control the life-saving and sustaining equipment in our hospitals.
Factory Automation: it drives the heavy, precise automation that keeps our economy moving.
Metalworking: only fluid power can push, pull, press, cut, and transform raw materials into finished products.

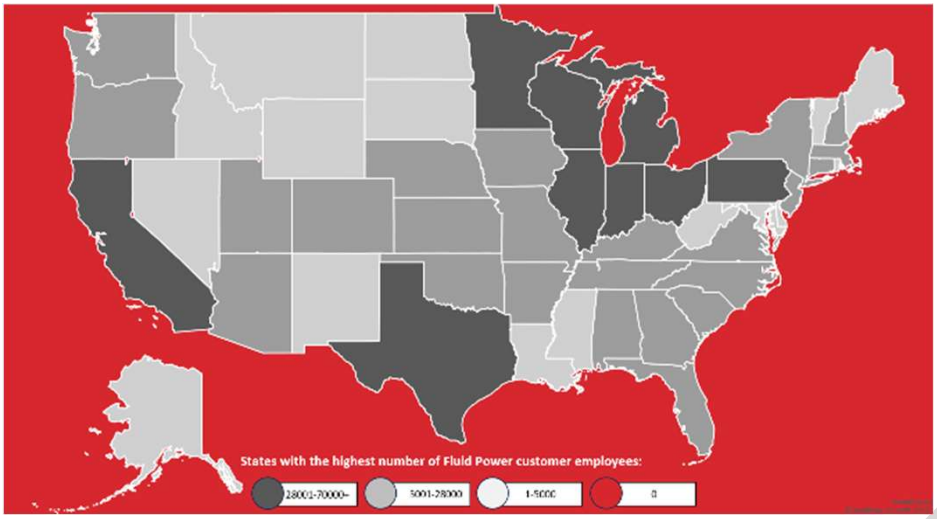
These are just a few examples of fluid power in action. Next time you're out and about, look around — you might be surprised by what fluid power is doing in your world.

Fluid power employs 61,000 people in the U.S.



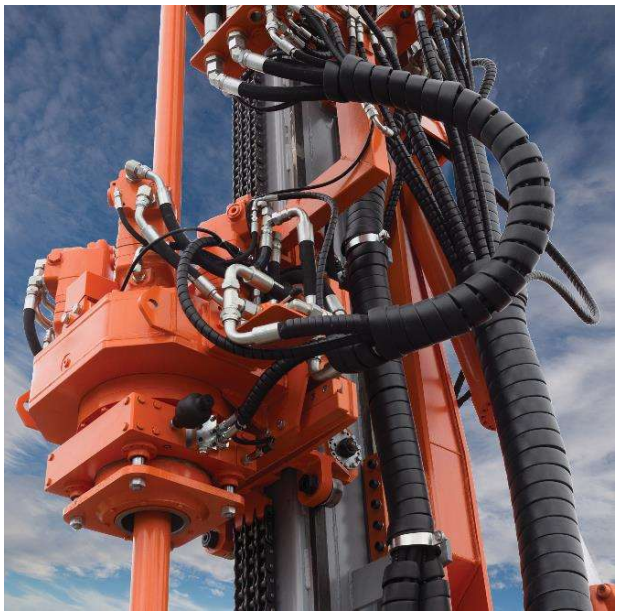
- The US fluid power industry is a $26 billion industry and a significant employer in the United States.
- Roughly 76% of the industry is hydraulics, and 24% is pneumatics.
- Based on data collected by the U.S. Census Bureau, we estimate that there are at least 772 fluid power companies in the United States.
- These companies employ 61,000 people with an annual payroll of at least $4.4 billion.
- These fluid power employers reside in 36 of the 50 U.S. states.
- The ten states with the highest number of these employers are highlighted in red.

Customers employ 935,000 people in the U.S.



- If we measure fluid power by its impact on all the industries it serves, however, we see a much more robust picture.
- Key industries that depend on fluid power employ 935,000 people with an annual payroll of at least $75 billion.
- These fluid power-dependent employers reside in nearly all 50 states.
- The states with the highest number of these employers are highlighted there in dark gray.
- The fluid power industry and the industries it helps support are a key part of the economic base of this country.

Exciting Fluid Power Career Opportunities



Design Engineers design fluid power systems and components as well as develop new concepts, applications and improvements of existing installations.

Sales Engineers market and sell fluid power systems and components, working closely with fluid power manufacturers, distributors, and customers.

Mechanics assemble and install fluid power systems and components, as well as troubleshoot and maintain systems on machines used in every facet of industry.

Technicians operate machines equipped with fluid power systems as well as manufacture and test fluid power systems and components.

- A vertical drill is pictured on this slide.
- Machines like this are used to drill into solid rock, harnessing and focusing the incredible forces of their hydraulic systems for an otherwise impossible task.
- Creating these complex systems – designing them, selling them, assembling them, maintaining them – is the challenging and rewarding work that the fluid power industry offers.
- *Anyone with a mechanical aptitude and a desire for variety in their work is a potential hire for the fluid power industry

Average Salaries & Education Levels for Fluid Power Related Careers

Position	Average Salary (From Bureau of Labor Statistics)	Typical Education
Design Engineer	$96,310	Bachelor's Degree
Sales Engineer	$108,530	Bachelor's Degree
Mechanic	$59,470	High School
Technician	$61,190	Associate's Degree

Multiple $2,500 Scholarships Available

- ✓ **High School and College Students are Eligible. The applicant does not have to be enrolled in a dedicated fluid power degree program but must be enrolled in a relevant program where fluid power is taught.**
- ✓ **Min. 2.5 GPA on Cumulative 4.0 scale**
- ✓ **Deadline: March 15, 2026**

Scholarship Application

Kickstart Your Career in Fluid Power

✓ **Upload Your Resume:**
For distribution to dozens of NFPA's HR Contacts

✓ **Discover Companies in the Industry:**
Access several company websites in one location

Wherever you are in your journey, if you want to learn more about how NFPA can be a resource in your education or future career please feel free to reach out to workforce@nfpa.com.

Upload Your Resume
www.nfpa.com

International Fluid Power™ Society

CERTIFICATION EMPOWERS OPPORTUNITY

ESTABLISHED 1960

Donna Pollander, ACA
CEO

Our Mission

The International Fluid Power Society (IFPS) will globally pursue and promote the application of Fluid Power technology through certification, standardization and education essential to professional growth.

As part of our mission, we offer numerous free learning and training resources on our website, along with additional resources available to our members.

For more information specific to student resources visit:

Fluid Power Certification

Showcase Your Knowledge & Skills

- IFPS Certification Tests provide an objective, third-party assessment of an individual's skill level are recognized industry-wide and are portable – they go where you go.
- IFPS Certification offerings keep pace with changing fluid power and motion control technologies and must be renewed every five years.

If you are interested in IFPS Certification, there are grants available and you may qualify for a **free** test.
Contact Donna Pollander – dpollander@ifps.org for more info!

Fluid Power Certification

Why Certify?

IFPS CERTIFICATION empowers individuals to:

- **Improve** career paths
- Establish **professional credentials**
- **Increase earning** potential
- **Improve skills** and knowledge
- **Add value** to your resume or company

IFPS Student Membership

IFPS Student membership provides the benefit of the Society's 50 years of expertise. Membership supports a non-profit organization dedicated to the unique interests of fluid power.

Review ALL the benefits an IFPS Membership provides:

Visit www.ifps.org or
call 856-424-8998 or contact me:
dpollander@ifps.org
to see how YOU can
Empower Your Opportunity.

International Fluid Power Society