

POWER HYDRAULICS Training Course

TR1603/102/001

APPLICATION FIELD - TARGET GROUP

Study of the basic knowledge of the physical principles governing fluid dynamics and understand the characteristics and different aspects of fluid systems, machines and components. Appropriate integrated practice and visual learning is executed in laboratory experiences.

This training module is devoted to improve the basic knowledge of field technical persons with refreshing of the know-how and verification of learning results.

TOPICS

The training course aims to familiarize participants with hydraulic circuits, pumps, actuators, valves, fluid, safety, maintenance and troubleshooting including practice in a working environment.

Items afforded:

- > **Harnessing Hydraulic Power:** training about the power of fluid and how it both exerts pressure to support loads and flows to move loads.
- > **Hydraulic Circuits:** covers the function and operation of various hydraulic circuit components and helps to understand how they work together.
- > **Pumps and Actuators:** show the function and operation of pumps and actuators and their relationship within the hydraulic system.
- > **Control Valves:** to understand how various valves function and affect system operation.
- > **Hydraulic Fluid:** focus on the components that store, conduct, and maintain hydraulic fluid.
- > **Hydraulic Systems Safety & Maintenance:** focuses on the importance of maintenance and troubleshooting.
- > **Focus on dangers and understanding how to lessen hazards,** accidents can be prevented.
- > **Hydraulic System Troubleshooting:** Understanding the troubleshooting process to provide participants with the clearest diagnostic information, allowing to make the most informed decisions in locating and correcting malfunctions.
- > **Laboratory experimentations and exercises are provided.**

SKILLS

Professional basic knowledge of Power Hydraulic technology principles, circuits, machines and applications. Management of hydraulic machines systems and capability for first intervention maintenance of systems and devices.

DURATION

60 hours

SESSION OF COURSE

Classroom: 10 session of 4 hours each
Laboratory: 5 session of 4 hours each

ENTRY REQUIREMENTS FOR PARTICIPANTS

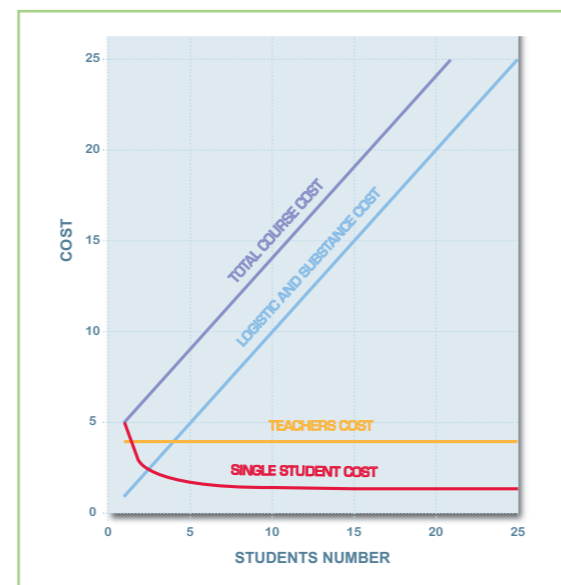
Vocational schools or high schools diploma of mechanical science. At least short employment experience.

MAXIMUM NUMBER OF STUDENTS PARTICIPATION

As you may see from the diagram, the costs of the course have their best efficiency with a number of participants ranging from 10 up to 25 units.

It is consequently suggestible to perform a teaching course with a minimum of 8 students up to a maximum of 25.

The diagram on the side in only indicative



LABORATORIES / TOOLINGS / INDIVIDUAL EQUIPMENTS



Hydraulic benches allowing to perform a complete experimental course on mechanics of fluids with clear visual appreciation of hydraulic principles.



Full-scale cutaways for training purposes for power hydraulics



Apparatuses designed to study flow phenomena through different pipe sections and orifices.



TEACHING & LEARNING MATERIALS / ASSESTMENTS METHODS / CERTIFICATES



- Theory manuals,
- Workbooks,
- Users manuals.
- Schematics presentations and tables.



Evaluation questionnaire at the end of the course



Certificate of attendance at the end of course



RECEPTION PACKAGE

WELCOMING SERVICES FEES:

- Visa issuing, consular expenses for entrance to Italy and residence permit (issued by Ministry of Interior Affairs) for study purposes
- Flight ticket to Italy and return

BOARDING AND ACCOMMODATION SERVICES

- Reception at the organized lodging facilities hotel
- Board including: breakfast, lunch and dinner, drinks included

TRAINING COURSE ANCILLARIES SERVICES:

- Laundry service
- Daytime service of fixed telephone through operator at Prodit premises
- Mobile prepaid telephone service - 50 Euro/month for each student
- Shuttle service from hotel to Prodit Engineering training center and return;
- Service of initial care for illness or injuries, available during the course time;
- Individual ordinary life and accident insurance, and national health service

TRAINING COURSE PACKAGE

DIDACTIC ACTIVITIES for 5 (five) days per week, as follows:

- Theoretical activities performed in classroom
- Practical activities performed in workshops and laboratories, equipped with didactic equipment
- Individual endowment for the student made up of text books, stationery and backpack
- Periodical tests for assessing student's learning
- Final examination
- Attendance Certificate (issued on the basic requirement of a minimum percentage of participation hours, equal to the 95% of the whole duration of the course)



COURSE LOCATION

These courses will be held at PRODIT ENGINEERING training center in Italy.