

IN THE FOREFRONT OF EDUCATION & TRAINING FOR INDUSTRY



Turnkey industrial and educational installations
from
600 Machinery International

Total Involvement

COMPREHENSIVELY EQUIPPED CENTRE OF EXCELLENCE

Working in partnership with the Wrexham Engineering Manufacturing Training (EMT) Centre, 600 Machinery International transformed a vacant craft workshop area into a state-of-the-art, purpose designed training installation housing a complete range of equipment:

Harrison Machines

Four M300 centre lathes - 330 mm swing x 1000 mm between centres.
One M390 centre lathe - 400 mm swing x 1250 mm between centres.
One VS330TR variable speed toolroom lathe fitted with DRO.
Two TU150P 2-axis CNC lathes. Fanuc controllers.
One Trainer 280 manual/CNC lathe with IBM based controller.



600 Machinery International

Two Richmond No.1 milling machines, one with dividing head - 1000 x 250 mm table.
One Richmond CNC milling machine. Heidenhain controller - 1270 x 254 mm table.
One Startrite drilling machine - 35 mm capacity in steel.
One Ibarmia drilling machine - 35 mm capacity in steel.
One surface grinder - 650 x 250 mm table.
One power saw - 195 mm capacity round or square.
One large surface plate.
Pedestal grinder.
Full complement of micrometers, vernier callipers, height gauges, and other inspection equipment.



Computer Room

Six off-line computer workstations for CNC programming and CAD/CAM, housed in a segregated annexe.

Total Supply

CAREFULLY SELECTED FOR STRUCTURED TRAINING

The machines and equipment at Yale College have been carefully chosen to provide the basis for a structured, step by step programme of training from basics to the leading edge of modern manufacturing technology:

- 1. Manual machines allow instruction in the fundamental principles and skills of manually controlled machining, including familiarisation with ferrous and non-ferrous materials, speeds, feeds, tooling geometry, tooling grades, depth of cut and especially all aspects of safety.*
- 2. Classroom work using the PCs in the computer room then permits an introduction to CNC programming using the special easy-to-use, menu driven software developed for the Trainer 280, a system which, although simple, makes full use of industrial system type features including G, M and S codes. programs prepared 'off machine' in this way can then be downloaded to -*
- 3. The Trainer 280, a powerful, full-function machine with a steady system speed suitable for gaining early experience. At this stage all the knowledge and confidence gained in Stages 1 and 2 are put into practice. Once full competence has been reached, trainees can move on to -*
- 4. Using the machines which run on full industrial standard FANUC CNC systems. Off-line and on-machine programming can be included, leading to trainees reaching a standard of competence which equips them for the real world of manufacturing engineering.*
- 5. CAD/CAM. The workstations in the computer room use full industrial standard system, and trainees can undertake the complete process, designing components on the computers, preparing programs to machine them, then downloading the programs to machines, followed by CNC production of the completed parts.*



Total Satisfaction

600 GROUP TURNKEY FACILITIES

600 Machinery International has for many years successfully undertaken the supply of complete workshop packages in the industrial, maintenance and educational sectors not only in the UK but throughout the world. As well as supplying products manufactured by companies within the 600 Group, other leading European manufacturers' equipment is also supplied, thereby providing the customer with a complete workshop package specifically designed to suit their precise requirements.

Particular emphasis has always been placed on the requirements of vocational education and training as demonstrated by the following list of typical projects undertaken overseas:

- | | |
|---------------------|---|
| Saudi Arabia | Ministry of Labour & Social Affairs. Vocational training centres. |
| Egypt | Zagazig University, Faculty of Engineering workshops and laboratories. |
| Saudi Arabia | King Abdulaziz University, Faculty of Engineering workshops and laboratories. |
| Nigeria | I.M.S., Engineering laboratories for Naval Training College. |
| U.A.E. Dubai | Costain-Taylor Woodrow, dry dock maintenance & training workshops. |
| Tanzania | Ministry of Education, vocational training machines. |
| Kuwait | P.A.E.E.T., training lathes. |

HARRISON MACHINES IN OVERSEAS EDUCATION AND TRAINING

The countries and organisations supplied include:

- | | |
|------------------|---|
| Abu Dhabi | Vocational Training Centre - 60 M250 and 25 M350 lathes. |
| France | UGAP (Ministry of Education, France) - 50 M400, 50 M300 and 60 M300 lathes. |
| Ghana | Education Services 78 M300 lathes. |
| Holland | Ministry of Education - 242 Trainer, 280 manual/CNC lathes. |
| Malaysia | Ministry of Education - 30 M300 and 2 M460 lathes. |
| Turkey | Ministry of National Education - 16 M250 and 242 M300 lathes. |
| Sri Lanka | Ministry of Higher Education - 22 M400, 68 M300 and 1 M250 lathes. |



COMPLETE TURNKEY PACKAGE

Harrison is a leader in the manufacture of high quality lathes, combining unrivalled experience in the world's industrial markets with an outstanding contribution in the field of progressive education and training.

Whether requiring just a single lathe or a complete turning workshop, those responsible for developing the skills of tomorrow's engineers have for decades turned to Harrison, the name they know and trust.

Harrison joins forces with sister company 600 Machinery International (both are part of The 600 Group, Europe's largest machine tool manufacturer) to provide a turnkey planning and supply facility specifically aimed at education and training.

This unique partnership takes advantage of the expertise of 600 Machinery International in completing hundreds of turnkey projects worldwide. It has at its disposal a team of dedicated specialists who will take your requirements from initial discussions through to final installation and completion.

The project featured here, at the Engineering and Manufacturing Training Centre, Yale College in Wrexham, North Wales, is a typical example. Harrison and 600 Machinery International have turned the organisation's objectives into reality by building and equipping a complete department, including the supply and installation of every single item needed to attain the very highest standards in engineering training.

Whilst the Yale College turnkey project centres round a UK location, the same level of commitment, professionalism and dedication could be expected anywhere in the world. The combined resources of Harrison and 600 Machinery international present a global capability.

"We identified a decline in training for engineering skills in the area and we set out to establish a responsive and flexible facility to fill the gap, to meet the needs of industry locally, nationally and internationally. To achieve this we wanted to be equipped with real industrial type machines and equipment right from the start."

In particular the Centre aims to provide an industrial type environment structured for the development of all levels of competence, from the traditional manual skills of metal cutting through to CNC machining, DNC programming and the concepts of CAD/CAM.

"Harrison soon convinced us of the outstanding quality of its products, service and support, and offered far and away the best value for money of all the firms we contacted. Throughout the planning, execution and completion of the project we had superb interactive co-operation, and we now have what we believe is one of the best and most complete facilities of its type in the field of educational training.

The teamwork created a facility which is now central to our on-going negotiations with a number of internationally-known industrial organisations involving us in their long-term training programmes."



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David Hughes, previously Training Manager of British Aerospace, fully appreciates the realistic training requirements of industrial employers and his experience has influenced the equipping and strategy of training programmes at Yale College.

MACHINE TOOLS and COMPLETE WORKSHOP PACKAGES



*The new dynasty of CNC Lathes
from the worlds leading
manufacturer of CNC Lathes.*



TORNADO A90



*High performance, low
maintenance & low running
costs.
Laser profiling has now become
affordable for all.*



LAZERBLADE 2.5kW



*The largest range of training
and manual/CNC centre
lathes in the world.*



ALPHA PLUS 800S



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