

<p>The Rexroth Drive & Control Academy</p>	<h1>WebTr@iner Hydraulics Basics</h1>	
<h2>HTG@</h2>	<p>On-line</p>	
<p>Aims</p> <p>The programs in the WebTr@iner series have been developed using internet technology and facilitate a new kind of computer-based training.</p> <p>The use of multimedia methods in conjunction with interactive simulation enhances the motivation of trainees and provides a lasting knowledge background by means of the practical exercises in Virtual Reality.</p> <p>Each module of the course is followed by an assessment. A pass mark must be obtained before the student can progress to the next module.</p> <p>The WebTr@iner is suitable for private study and for those who wish to upgrade their knowledge.</p> <p>Teachers and trainers will also find the Web Tr@iner useful if they wish to integrate new teaching media and methods in their teaching programs.</p> <ul style="list-style-type: none"> • This on-line course aims to provide a good understanding of the basics of hydraulics 	<p>Course Content</p> <ul style="list-style-type: none"> • What is hydraulics <ul style="list-style-type: none"> • Basic terms • Basic characteristics • System comparison • Applications • Basic Physics <ul style="list-style-type: none"> • Mass, Force & Pressure • Pascal's Law • Absolute pressure • Flow rate & flow control • Types of flow • Creation & throttling of flow rate • Design of a hydraulic system <ul style="list-style-type: none"> • Energy converters • Functionality & Components • Functional groups & components • Hydraulic circuits • Graphical Symbols & Circuit Diagrams <ul style="list-style-type: none"> • Functions • Systematics • Energy supply, control & processing • Energy conversion • Other accessories • Hydraulic Fluids <ul style="list-style-type: none"> • Functions • Tanks • Requirements • Types • Viscosity • Compressibility • Thermal expansion • Analysis • Hydraulic Pumps <ul style="list-style-type: none"> • Functions • Distinguishing characteristics • Standard pumps • External gear pumps • Directly operated vane pumps • Calculations • Efficiency • Hydraulic Motors <ul style="list-style-type: none"> • Functions • Distinguishing characteristics • Standard motors • Radial piston motors • Calculations • Efficiency • Hydraulic Cylinders <ul style="list-style-type: none"> • Operating principles & functions • Design & operations • Types of cylinders • Types of design • Technical specifications • End position cushioning • Air bleeding 	
<p>Pre-requisites</p> <ul style="list-style-type: none"> • No previous knowledge required 		
<p>Participants</p> <ul style="list-style-type: none"> • Design engineers • Maintenance Engineers • Project Engineers • Students 		
<p>Notes</p>		