

教学多媒体 Teaching and Learning Media

博世力士乐 传动与控制学院



知识就是力量

力士乐传动与控制学院的教学多媒体能让您拓展知识面，增强竞争力。尤其是在技术领域，知识是您迈向成功的最重要的途径之一，知识可以通过教育来获得。这份目录包含了各个领域的多媒体资料，既适用于未来一代的工程师，也适用于那些已拥有成功事业的专业人士们。

本目录涵盖了从电子传动与控制技术、液压技术、气动技术到线性组装技术的教学多媒体资料，能够令您体验到各类传动技术之间的跨越与差异。教学多媒体既可用于自学，也可作为正式授课的辅助资料。

我们非常关注对现有资料的不断改进与新内容的创新扩展，并乐意从您的反馈中获得建议。

力士乐传动与控制学院

Knowledge is Everything

Expand your knowledge and boost your competence with teaching and learning media from the Drive & Control Academy. Especially in the field of technology, knowledge is one of the most important guarantees of success and needs to be cultivated. This catalog contains a wide range of media both for the next generation of engineers and for the professional who is already enjoying a successful career. The vast breadth of teaching and learning media for the technological fields of electric drive and control technology, hydraulics, pneumatics and linear and assembly technology gives cross-technology insight and allows a comparison of the different drive technologies. The media available are equally well suited for self study or as an accompaniment to formal tuition. The continuous further development of existing media and the development of new content is an issue close to our hearts. We will happily consider your suggestions any ask you for your feedback.

Kind regards

The Drive & Control Academy

目录 • Content

| | |
|---------------|-------------------------------|
| 5 | 综述 • Overview |
| 6-17 | 液压 • Hydraulics |
| 6-12 | 软件 • Software |
| 13-17 | 书籍 • Literature |
| 18 -24 | 气动 • Pneumatics |
| 18-20 | 软件 Software |
| 21-23 | 书籍 • Literature |
| 24 | 培训资料 • Material for training |
| 25 | 机电一体化 • Mechatronics |
| 25 | 书籍 • Literature |
| 26-27 | 总线技术 • BUS technology |
| 26-27 | 软件 Software |
| 28 | 培训工具 • Training tools |
| 30-32 | 订货号索引 • Key of numbers |
| 33-35 | 订货单 • Order form |

综述 • Overview

e-Le@rning 软件 • e-Le@rning Software

WebTr@iner

WebTr@iner系列课程的开发运用了网络技术，并采用了全新的电脑培训方式。多媒体教学方法与互动模拟的融合大大提高了学生的学习动力，学生通过在虚拟环境中的实践练习可以获得深刻持久的知识。该软件既可用于自学，也适用于想要继续深造的人们。另外，教师与培训人员也可使用该软件综合新的教学方法进行教学工作。

计算机培训 CBT

这种互动式的培训形式适用于基础和高级的职业培训，它可以直观易懂地展示各类物理过程。

WebTr@iner

The programs in the WebTr@iner series have been developed using internet technology and facilitate a new kind of computer-based training. 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. The WebTr@iner is suitable for private study and for those who wish to upgrade their knowledge. 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.

Computer based training CBT

The interactive training program can be used in basic and advanced vocational training. It represents physical processes in an illustrative and understandable way.

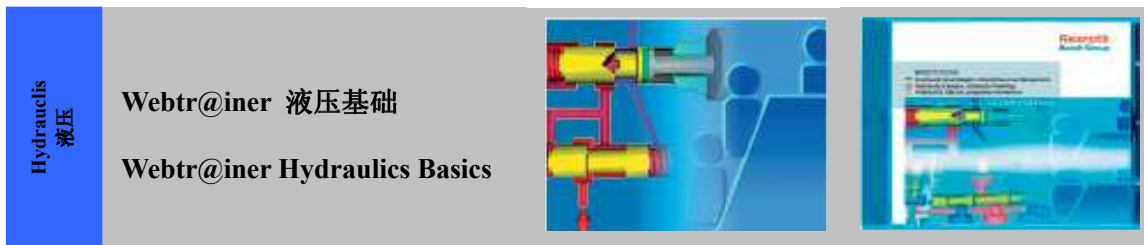
书籍 • Literature

- 培训与信息手册 • 教师、学生指导手册 • 流体技术字典
- Training and information manuals • Manuals for trainers and trainees
- Dictionary of Fluid Technology

培训资料 • Material of Training

- | | | |
|---------------|----------------------------|-----------------|
| •CD-ROM / DVD | • 培训图表/海报 | • 培训工具 |
| •CD-ROM / DVD | •Training charts/Posters • | •Training tools |

液压 | Hydraulics 软件 • Software



内容

泵（齿轮泵和叶片泵）
三位四通换向阀
节流阀（1）
节流阀（2）
溢压阀
三通式减压阀
二通式溢流阀
液控单向阀
带蓄能器的液压系统
液压缸的节流调速

系统配置要求

Microsoft Windows 98/NT 4.0 SP4/ ME/2000/XP
Microsoft Windows 98/NT 4.0 SP4/ ME/2000/XP
Pentium 200 MHz 或更高
64 MB RAM (XP需要128MB)
64 MB RAM (XP需要128MB)
屏幕分辨率 1024x768, 65536色
屏幕分辨率 1024x768, 65536色
16倍CD-ROM光驱
Microsoft Internet Explorer 5.x
Microsoft Internet Explorer 6.0 (XP)
Sun Java Runtime环境
(JRE 用于 XP)

订货号
1 070 083 001
DE/EN/ES

Contents

Pumps (gear and vane types) •
4/3 Port directional control valves
Throttle valves (1) •
Throttle valves (2) •
Pressure limiting valves •
3 port pressure reducing valves •
2 port flow control valves •
Non-return (check) valves, controllable
System with accumulators
Throttle valve control of cylinder
speed •

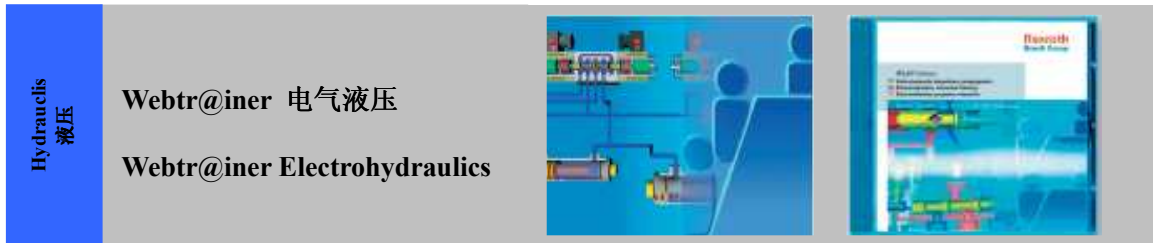
System Requirements

Microsoft Windows 98/NT 4.0 SP4/ •
ME/2000/XP
Pentium 200 MHz or more •
64 MB RAM (128 MB RAM necessary •
for XP)
Screen resolution 1024x768, 65536 •
colors
16xCD-ROM drive •
Microsoft Internet Explorer 5.x •
Microsoft Internet Explorer 6.x for XP • Sun Java
Runtime Environment • (JRE for XP)

Part number
1 070 083 001 DE/EN/ES

液压 | Hydraulics

软件 • Software



Webtr@iner 电气液压

Webtr@iner Electrohydraulics

内容

电磁阀
三位四通电力换向阀
控制阀
两位四通换向阀的卸荷
控制阀
双液压缸的速度控制
三液压缸的速度控制
液压缸的差动回路
液压缸的顺序控制
速度控制, 快进/工进
压力继电器
可调节的压力范围

系统配置要求

Microsoft Windows 98/NT 4.0 SP4/ •
ME/2000/XP
Pentium 200 MHz或更高
64 MB RAM (XP需要128MB)
64 MB RAM (XP需要128MB)
显示器分辨率 1024x768 •
65536 色
16倍CD-ROM光驱
Microsoft Internet Explorer 5.x •
Microsoft Internet Explorer 6.x (XP)
Sun Java Runtime 环境
(JRE 用于 XP)

订货号

R 961 000 819
DE/EN/ES

Contents

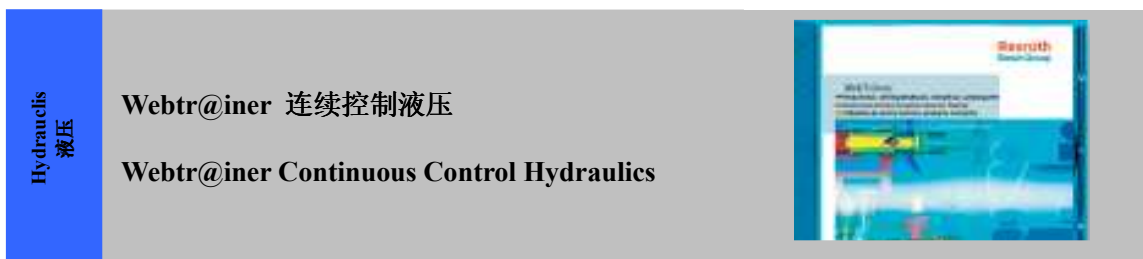
Solenoid valves •
4/3 Port electrically operated
directional •
control valves
Pressure relief by 4/2 port directional •
control valves
Control of two cylinder speeds •
Control of three cylinder speeds •
Differential switching of a cylinder
Sequential control of cylinders •
Speed control, rapid feed/operating
feed •
Pressure switches
Adjustable pressure ranges •

System Requirements

Microsoft Windows 98/NT 4.0 SP4/ •
ME/2000/XP
Pentium 200 MHz or more •
64 MB RAM (128 MB RAM necessary •
for XP)
Screen resolution 1024x768, •
65536 colors
16xCD-ROM drive •
Microsoft Internet Explorer 5.x •
Microsoft Internet Explorer 6.x for XP •
Sun Java Runtime Environment •
(JRE for XP)

Part number
R 961 000
819
DE/EN/ES

液压 | Hydraulics 软件 • Software



内容

比例电磁阀
比例/方向控制阀
比例压力控制阀
比例节流溢流阀
压力控制
位置控制
速度控制
数字同步
能量闭环控制
其他外部设备

系统配置要求

Microsoft Windows 98/NT 4.0 •
SP4/ME/2000/XP
Pentium 200 MHz或更高 •
64 MB RAM (XP需128MB RAM)
64 MB RAM (XP需128MB RAM)
显示器分辨率 1024x768, •
65536 色
16倍CD-ROM光驱
Microsoft Internet Explorer 5. x
Microsoft Internet Explorer 6. x
(XP)
Sun Java Runtime环境
(JRE 用于 XP)

订货号

R 927 001 005 DE/EN/ES

Contents

Proportional solenoid•
Proportional/direct. control valves •
Proportional pressure control valves•
Proportional throttle and flow control valves
Pressure control•
Position control •
Speed control•
Digital synchronisation •
Closed loop control of power•
Decentralized peripherals•

System Requirements

Microsoft Windows 98/NT 4.0
SP4/ME/2000/XP
Pentium 200 MHz or more •
64 MB RAM (128 MB RAM
necessary for XP)
Screen resolution 1024x768,
65536 colors
16xCD-ROM drive •
Microsoft Internet Explorer 5.x
Microsoft Internet Explorer 6.x
for XP •
Sun Java Runtime Environment•
(JRE for XP)

Part number

R 927 001 005
DE/EN/ES

液压 | Hydraulics 软件 • Software



将Webtr@iner中各个分离的媒体模块（如视频、VRML、试验等）综合成独有的教学理念。系统配置要求与各自的Webtr@iner目录相符。CDROM中还包含一些额外的插件程序。

Separate media modules (e.g. videos, VRMLs, experiments, etc.) from the WebTr@iners for integration into own teaching concepts. The system requirements correspond to the respective WebTr@iner titles. Additional plug-ins are contained on the CD-ROM.

| | 订货号 Part number |
|--|------------------------|
| HYmedia/1 WebTr@iner 液压基础多媒体 (1 070 083 001) | R961 001 728 |
| HYmedia/1 Media from WebTr@iner Hydraulics Basics (1 070 083 001) | R961 001 728 EN |
| HYmedia/2 WebTr@iner 电气液压多媒体 (R961000819) | R961 001 729 |
| HYmedia/2 Media from WebTr@iner Electrohydraulics (R961000819) | R961 001 729 EN |
| HYmedia/3 WebTr@iner 连续控制液压 (1 070 083 001) | R961 001 730 |
| HYmedia/3 Media from WebTr@iner Continuous Control Hydraulics (R 927 001 005) | R961 001 730 EN |

液压 | Hydraulics 软件 • Software



液压培训教程修订版含有全新的图片与用户操作指南。光盘中的回路和剖面模型与液压培训手册（第一册）《液压技术基础与元件》相匹配。

内容

液压技术基础
物理基本原理
章节练习
技术词典
二次控制
轴向柱塞机
回路和元件动画

系统配置要求

Microsoft
Windows98/NT4.0/
ME/2000/XP
Pentium 200 MHz或更高
32 MB RAM •
XGA（最低），显示器分辨率 1024x768 •
approx. 70 MB 硬盘
CD-ROM 光驱

订货号

R 900 884 371 DE/EN/ES

Revised version of the Hydraulic Trainer with new graphics and new operator guidance. The contents of the CD- circuits and sectional models- were adapted to the new volume 1 of the Hydraulic Trainer manual: Hydraulics ,Basic Principles and Components

Contents

Basic principles of hydraulics
Basic physical principles •
Exercises for the individual chapters
Dictionary •
Secondary control •
Axial piston machines •
Animation of circuits and components•

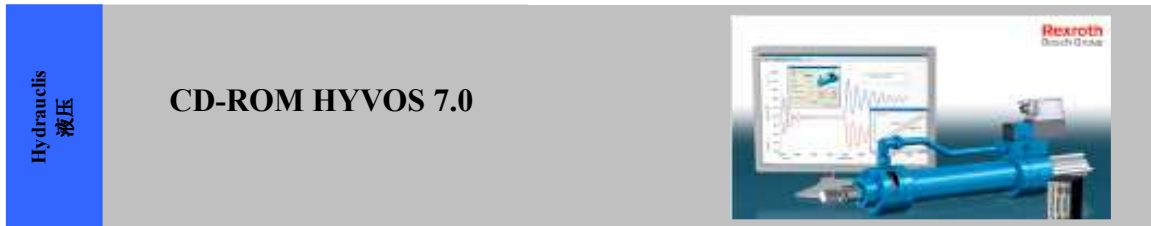
System Requirements

Microsoft Windows 98/NT4.0/
ME/2000/XP
Pentium 200 MHz or more
32 MB RAM •
XGA min., screen resolution 1024x768 •
approx. 70 MB fixed disk memory •
CD-ROM drive •

Part number

R 900 884 371 DE/EN/ES

液压 | Hydraulics 软件 • Software



阀控液压缸驱动的仿真

对阀控液压缸驱动的设计与优化往往要求设计人员具有丰富的经验与对各类技术全面深入的理解。液压、电子、控制与传感器技术之间纷繁而复杂的相互影响也使此驱动的设计充满挑战。HYVOS 7.0为您清晰地描述了几乎最具难度的技术关系，可以在设计过程中适时地给予您帮助。

有效性

无论是在开路还是闭合回路中，HYVOS 7.0都可以仿真阀控液压缸驱动。大量的仿真参数不仅可以建模复杂的结构，还可以重新再现几乎任何的运动或任何的加载次序。此软件为您提供了一个可以简化复杂实验和大大加速开发次数的工具，更不用说可以成功地避免设计中产生的失误。

简单性

HYVOS 7.0人性化的用户界面使操作更加简单清晰。因此，这款软件不仅适用于工程设计与发展的实际应用，还可用于针对液压传动技术的相关培训。

订货号：标准版：R 961 005 099 教学版：R 961 005 100

Simulation software for valve-controlled cylinder drives

Planning and optimizing controlled hydraulic drives requires a high degree of experience and in-depth knowledge of the different technologies. The complex interplay between hydraulics, electronics, control technology and sensors makes this drive form highly challenging. HYVOS 7.0 transparently represents even the most difficult of technical relationships and supports you in project planning with these drive systems.

Effective

HYVOS 7.0 allows the simulation of valve-controlled cylinder drives in both open and closed circuits.

Hundreds of parameters allow the modeling of complex structures and the reproduction of practically any motion or load sequence. This software gives you a tool that minimizes complex experimental work and greatly accelerates development times – quite apart from avoiding far-reaching errors in project planning.

Simple

The convenient user interface makes operating HYVOS 7.0 straightforward. This means that the software is not only suitable for practical applications in project planning and development, it can also be used as a valuable tool for training in hydraulic drive technology.

Part number Standard version: R 961 005 099

Schools version: R 961 005 100

液压 | Hydraulics 软件 • Software



该软件由若干独立的电子数据表组成，包含多种计算公式。

内容

线性传动

速度曲线

单活塞杆式液压缸

双活塞杆式液压缸

快速回程缸

单活塞液压缸的固有频率

双活塞液压缸的固有频率

回转传动

转速曲线

行进曲线

定量液压马达

变量液压马达

液压马达的固有频率

转动惯量

一般传动

泵功率

管路

水力蓄力器

节流孔

可压缩性

订货号：

R 900 854 114 DE/EN

This software is a collection of individual, non-linked spreadsheets containing calculation formulas.

Contents Linear drives

- . • Velocity diagram • Single rod cylinders
- . • Double rod cylinders • Cylinders in regenerative circuits
- . • Natural frequency of the single rod cylinder
- . • Natural frequency of the double rod cylinder
- . • Natural frequency of the plunger cylinder

Rotary drives

- . • Speed diagram • Travel diagram
- . • Hydraulic motor, fixed displacement
- . • Hydraulic motor, variable displacement
- . • Natural frequency of the hydraulic motor
- . • Mass moment of inertia


General

- . • Pump power • Pipe
- . • Hydraulic accumulator • Orifice
- . • Compressibility

Part number

R 900 854 114 DE/EN

液压 | Hydraulics
书籍 • Literature

| | | |
|------------------|---|---|
| Hydraulics 液压 | <p>流体技术基础及元件 第一册</p> <p>Basic Principles and Components of Fluid Technology –Volume 1</p> |  |
|------------------|---|---|

内容

基础知识
符合DIN ISO 1219的图形符号
液压机液体
液压泵
液压马达
轴向柱塞单元• 液压缸• 回传传动装置

水力蓄力器及应用
隔离阀
换向阀
压力控制阀/ 流量控制阀
过滤器与定量配给技术
附件 • 连接技术 • 小型液压动力元件

图片, 图纸, 电路图与图表都可在CD-ROM “HY1graphics” R 961 000 799 中找到
3. 修正版, 325页

订货号
R 900 018 613 DE

Contents

Basic principles •
Graphic symbols according to DIN ISO 1219
Hydraulic fluids •
Hydraulic pumps•
Hydraulic motors•
Axial piston units • Hydraulic cylinders• Slewing drives•

Hydraulic accumulators and Their application
Isolator valves•
Directional control valves•
Pressure control valves / flow control • valves
Filters and filtration techniques •
Accessories• Connecting techniques • Hydraulic small power units. •



Pictures,drawings, circuit diagrams and graphics are available on the CD-ROM
“HY1graphics” R 961 000 799.3. revised edition, 344 pages

Part number
R 900 018 614 EN

| | | 订货号 |
|--------------------|---|------------|
| CD-ROM HY1graphics | 408 张幻灯片 与液压培训教程第一册配套 | R961000799 |
| CD-ROM HY1graphics | 408 slides accompanying the book “Hydraulics Trainer”, Volume 1 | — |

液压 | Hydraulics

书籍 • Literature

| | | |
|------------------|--|--|
| Hydraulics 液压 | <p>液压培训教程 CBT :第一册+ CD ROM</p> <p>Hydraulics Trainer CBT: Volume 1+ CD ROM</p> |   |
|------------------|--|--|

订货号: R900 884 049 Part Number : R900 884 050EN

| | | |
|------------------|---|--|
| Hydraulics 液压 | <p>液压理论及应用</p> <p>Hydraulics. Theory and Applications</p> |  |
|------------------|---|--|

本书全面而紧凑地讲解了从基本压力的形成到液压设备故障诊断的油压理论知识（比例与控制系统除外）。除了对油压元件及其功能的描述外，本书还主要阐述了在静止与行走机械液压中的电路与应用理论。 291页

订货号: R 961 000 784

This book covers in compact form the complete subject of Oil Hydraulics (with the exception of proportional and control-systems) from basic pressure production through to troubleshooting in hydraulic installations. Supported by a description of components and their functions, the main theme of the book is the presentation of circuits and applications in stationary and mobile hydraulic equipment. 291 pages

Part number: R 961 000 784

液压 | Hydraulics

书籍 • Literature



内容

简介

泵和液压马达概述

齿轮泵和齿轮马达

电液一体式泵

紧凑型泵组

单向阀

压力控制阀

流量控制阀

方向控制阀

行走机械的基本液压回路

行走机械液压系统的方向控制

阀块

应用实例

拖拉机的电液悬架控制 (EHR)

车辆的液压风机驱动

行走机械液压传动的CAN总线技术

行走机械的液压流体

202页

订货号

R 961 000 790

Contents

Introduction•

Pumps and hydraulic motors in general•

Gear pumps and motors•

Electro-hydraulic pumps•

Compact power units •

Check valves •

Pressure control valves•

Flow control valves•

Directional control valves•

Basic circuits in mobile hydraulics •

Directional control valve blocks in mobile •

hydraulics Applications•

Electrohydraulic hitch control (EHR) for tractors

Hydrostatic fan drives in motor vehicles

CAN bus technology in mobile hydraulics

Fluids in mobile hydraulics•

202 pages

Part number

R 961 000 791EN


液压 | Hydraulics

书籍 • Literature

Hydraulics
液压

教师、学员操作手册

Manuals for trainers and trainees



本手册与BIBB建议的元件组套相符，并可在液压领域中提供符合实际要求的不同层次的培训。练习集后附有详尽的教师与学员使用信息。所有手册的结构布局整齐一致，并详细地描述了各个试验的具体步骤。学员手册还包含用于填写实验结果的控制表，

在表中发现的各类问题可使实验的效果更加趋于完美。

1 BIBB= Bundesinstitut für berufliche Bildung (德国联邦职业教育研究所)

The manuals are matched to the component sets proposed by BiBB and offer training in line with practical requirements at different training levels in the field of hydraulics. Detailed information for the trainee and trainer supplement the set of exercises.

The manuals have an identical structure, and describe the individual experiments step by step. The trainee's manual comprises control sheets for entering the results obtained. Questions round off the series of experiments.

1 BiBB = Bundesinstitut für berufliche Bildung (Federal Institute for Vocational Training Affairs)

| | | 订货号 |
|--|--------------------------------------|--------------------------|
| 液压基本原理操作手册 (符合 BIBB 教程) | 教师手册 学员手册 | R900215921 R900215919 |
| Manuals Hydraulics Basic principles (in line with BIBB) | Trainer's manual Trainee's manual | R900215921 R900215919 |
| 电气液压操作手册 (符合 BIBB 教程) | 教师手册 学员手册 | R900071655 R900071656 |
| Manuals Electrohydraulics (in line with BIBB) | Trainer's manual Trainee's manual | R900071655 R900071656 |


液压 | Hydraulics

软件 • Software

Hydraulics
液压

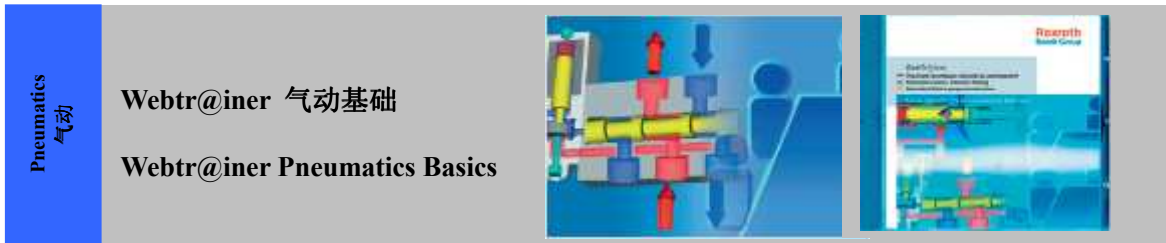
教师、学员操作手册

Manuals for trainers and trainees



| | | 订货号 Part number |
|--|--------------------------------------|----------------------------------|
| 比例液压操作手册 (模拟控制) | 教师手册 学生手册 | R900 849 857 R900 849 854 |
| Manuals Proportional Hydraulics (analog control) | Trainer's manual Trainee's manual | R900 849 857EN R900 849 854EN |
| 比例液压操作手册 (数字控制) | 教师手册 学生手册 | R900 617 739 R900 617 740 |
| Manuals Proportional Hydraulics (digital control) | Trainer's manual Trainee's manual | R900 617 739EN R900 617 740EN |
| 行走机械液压操作手册 | 教师手册 学生手册 | R900 203 623 R900 203 622 |
| Manuals Mobile Hydraulics | Trainer's manual Trainee's manual | R900 203 623EN R900 203 622EN |
| 回转传动装置操作手册 | 教师手册 学生手册 | R900 216 009 R900 216 009 |
| Manuals Rotary drive | Trainer's manual Trainee's manual | R900 216 009EN R900 216 009EN |

气动 | Pneumatics
软件 • Software



内容

气压源
压力调节阀
气源处理单元
单向节流阀
两位三通换向控制阀，机械操作
两位五通换向控制阀，气动操作
两位五通换向控制阀，电气操作
单作用气缸
末端带弹簧的双作用气缸，缓冲
回转传动装置

Contents

Air pressure supply
Pressure regulator valves
Maintenance unit
Non-return throttle valves
3/2 port directional control valves,
mechanically operated
5/2 port directional control valves, pneumatically operated
5/2 port directional control valves, electrically operated
Cylinders, single acting

系统配置要求

Microsoft Windows 98/NT 4.0
SP4/ME/2000/XP
aPentium 200 MHz或更高
64 MB RAM (XP需要128 MB RAM)
64 MB RAM (XP需要128 MB RAM)
显示器分辨率 1024x768,
65536色
16倍CD-ROM光驱
Microsoft Internet Explorer
5.x • Microsoft Internet Explorer 6.x (XP)
Sun Java Runtime环境 (JRE 用于 XP)

System Requirements

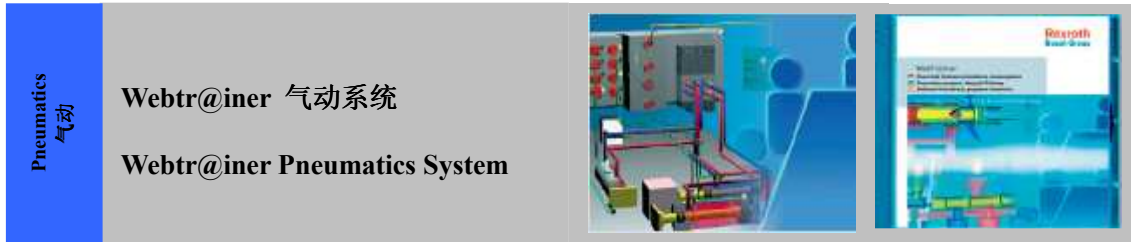
Microsoft Windows 98/NT 4.0 •
SP4/ME/2000/XP
Pentium 200 MHz or more •
64 MB RAM (128 MB RAM necessary for XP)
Screen resolution 1024x768,
65536 colors
Z6xCD-ROM drive •
Microsoft Internet Explorer 5.x •
Microsoft Internet Explorer 6.x for XP
Sun Java Runtime Environment •

订货号

1 070 083 007 DE/EN/ES

气动 | Pneumatics

软件 • Software



内容

梭阀

双压阀

快速排气阀

气缸行程可变的系统

气缸行程与进给可变的系统

气缸力控制

气缸运动锁定系统

运动次序可变系统

带辅助设备的系统

带辅助设备的诊断系统

系统配置要求

Microsoft Windows 98/NT 4.0 •

SP4/ME/2000/XP

Pentium 200 MHz或更高

64 MB RAM (XP需128 MB RAM)

64 MB RAM (XP需128 MB RAM)

显示器分辨率 1024x768, •

65536 色

16倍CD-ROM光驱

Microsoft Internet Explorer

5. x • Microsoft Internet

Explorer 6. x (XP)

Sun Java Runtime 环境 (JRE 用
于XP)

订货号

R 961 001 656 DE/EN/ES

Contents

Shuttle valves (OR)•

Twin-pressure valves (AND)•

Rapid exhaust valves•

System with variable cylinder stroke•

System with variable feed and variable•
cylinder stroke

Control of cylinder power •

System for cutting off cylinder
operation•

System for various movement
sequences•

System with decentralised peripherals•

Diagnosis in systems with decentralised•
peripherals

System Requirements

Microsoft Windows 98/NT 4.0 •

SP4/ME/2000/XP

Pentium 200 MHz or more •

64 MB RAM (128 MB RAM •
necessary for XP)

Screen resolution 1024x768, •

65536 colors

16xCD-ROM drive •

Microsoft Internet Explorer 5.x•

Microsoft Internet Explorer 6.x for XP

Sun Java Runtime Environment•
(JRE for XP)

Part number

R 961 001 656

DE/EN/ES

气动 | Pneumatics
软件 • Software



将Webtr@iner中各个分离的媒体模块（如视频、VRML、试验等）综合成独有的教学理念。系统配置要求与各自的Webtr@iner目录相符。CDROM中还包含一些额外的插件程序。

Separate media modules (e.g. videos, VRMLs, experiments, etc.) from the WebTr@iners for integration into own teaching concepts. The system requirements correspond to the respective WebTr@iner titles. Additio-nal plug-ins are contained on the CD-ROM.

| | 订货号 |
|--|-----------------|
| PNmedia/1 WebTr@iner 气动基础 (1 070 083 007) | R 961 001 731 |
| PNmedia/1 Media from WebTr@iner Pneumatics Basics (1 070 083 007) | R 961 001 731EN |
| PNmedia/1 WebTr@iner 气动系统 (R 961 001 656) | R 961 001 732 |
| PNmedia/1 Media from WebTr@iner Pneumatics Systems (R961 001 656) | R 961 001 732EN |

气动 | Pneumatics

书籍 • Literature

| | | |
|------------------|--|---|
| Pneumatics 气动 | <p>气动理论及应用</p> <p>Pneumatics. Theory and Applications</p> |  |
|------------------|--|---|

该书图文并茂地讲解了各类气动和电气-气动元件的功能与操作方法。（不包括比例与控制元件）PNgraphics” (R 900 701 018)

光盘中包含书内插图、电路图与彩图

166页

订货号

R 961 000 783

This book describes and illustrates in compact style the operation of a variety of pneumatic and electropneumatic components (excluding proportional and control components) together with their function and operation.

Drawings, circuit diagrams and colour graphics from the book are available on CD-ROM “PNgraphics” (R 900 701 018) 166 pages

Part number

R 927 001 146 EN

CD-ROM PNgraphics



| | | 订货号 |
|--------------------------|--|------------------------|
| CD-ROM PNgraphics | 250 张幻灯片，与《气动理论与应用》配套 | R 900 701 018 |
| CD-ROM PNgraphics | 250 slides accompanying the book “Pneumatics. Theory and Applications” | R 961 001 731EN |

气动 | Pneumatics 书籍 • Literature



该书包含了符合BiBB¹ 的“Pneumatik-Aufgaben, Protokollblätter, Übungsschaltungen” (1999, 第二版, ISBN 3-410-70437-X) 与 “Pneumatik” (第一版) 的练习。

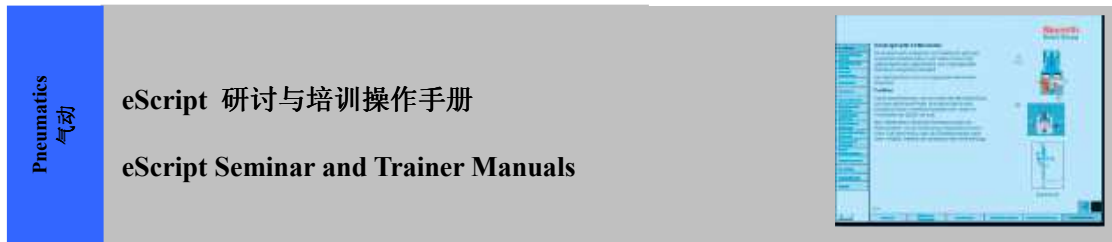
¹ BiBB = 德国联邦职业教育研究所

This book includes exercises of the corresponding series from the BiBB¹, “Pneumatik-Aufgaben, Protokollblätter, Übungsschaltungen”, 2nd edition 1999, ISBN 3-410-70437-X and the previous BiBB editions “Pneumatik” of the Bundes- institut für Berufsbildung (Federal Institute for Vocational Training) in Berlin. ¹ BiBB = Bundesinstitut für berufliche Bildung (Federal Institute for Vocational Training Affairs)

| | | 订货号 Part number |
|---|--------------------------------------|----------------------------------|
| 气压传动操作手册 | 教师手册 学生手册 | R900 783 082 R927 001 116 |
| Manuals Pneumatics | Trainer's manual Trainee's manual | R900 783 082EN R927 001 116EN |
| 电气气动/PLC/PN 控制操作手册 | 教师手册 学生手册 | R900 783 083 R927 001 115 |
| Manuals Electropneumatics /PLC/PN Controls | Trainer's manual Trainee's manual | R900 783 083EN R927 001 115EN |

气动 | Pneumatics


书籍 • Literature



| | | 订货号 Part number |
|--|--|--------------------|
| eScript PN/K1 气动基础 | 此手册使用多媒体集成方式（PDF、录像、互动组合模型、互动练习）编写，为 Microsoft Powerpoint 格式 | R 961 002 074 |
| eScript PN/K1 Basic pneumatics | Seminar documents written in Microsoft Powerpoint for trainees and trainers with integrated media (PDF, videos, interactive sectional models, interactive exercises) | R 961 002 074 |
| 研讨手册 PN/K1 气动基础 | | R961 001 657 |
| Seminar manual PN/K1 Basic pneumatics | | R961 001 657 |
| 培训手册 PN/K1 气动基础 | | R961 001 658 |
| Trainer's manual PN/K1 Basic pneumatics | | R961 001 658 |
| 培训手册 PN/K2 电气气动与 PLC 技术 | | R961 001 735 |
| Trainer's manual PN/K2 Electropneumatics and PLC technology | | R961 001 735 |

气动 | Pneumatics

培训材料 • Material for training

| | | |
|------------------|---|---|
| Pneumatics 气动 | 气动能量转换, 阀与控制类型 DVD DVDs Energy Conversion, Valves and Types of Control |  |
|------------------|---|---|

| | 订货号 Part number |
|-----------------------------------|--------------------|
| DVD 气动, 能量转换 | R961 001 990 |
| DVD Pneumatics, Energy Conversion | R961 001 990EN |
| DVD 气动, 阀 | R961 001 991 |
| DVD Pneumatics, Valves | R961 001 991EN |
| DVD 气动, | R900 001 992 |
| DVD Pneumatics, Types of control | R900 001 992EN |

机电一体化 | Mechatronics

书籍 • Literature



Pneumatics
气动

机电一体化理论与应用

Mechatronics. Theory and Applications

该书全面地讲解了有关机电一体化系统的项目开发、试运行与故障诊断的知识。

主要内容有：

机电一体化系统的元器件•
能量的产生与传输• 气动、
液压、电子传动、传感器与
控制技术的编程与文档•
安全技术与指导方案• 系
统试运行及故障诊断

318页

订货号

R 961 000 788

The book teaches the broad
knowledge needed for project
planning, commissioning and
diagnosis on mechatronic

systems. Its main themes are

Components of mechatronic

systems • Energy production

and transport• Pneumatic,

hydraulic and • electrical drive

technology Sensor technology

and control

• technology Programming and documentation • Safety
technology and guidelines • Systematic commissioning and•
fault diagnosis

318 pages

Part number

R 927 001 083 EN

总线技术 | BUS-technology
软件 • Software

什么是现场总线？它是怎么工作的？差异又在哪里？以前，为了得到这个答案，初学者们不得不去茫茫无际的知识海洋中搜寻相关信息，再费劲九牛二虎之力把这些庞大凌乱的信息汇总，去探求一个可能的答案。而现在，WebTr@iner “总线系统” 这款培训软件使您仅需利用现场总线系统ASI, Profibus-DP, Interbus-S和CAN的特性特征，就可以有效地获得相关信息，得到问题的答案。这种在虚拟环境中进行互动练习的方式能够帮助学员提高相关的知识水平。

订货号：R 927 001 000

| | | |
|---|--|--|
| <p>What is a Field Bus? How does it work?</p> <p>What are the differences?</p> <p>To find the answers, beginners previously had to search for information in various scientific sources and then laboriously put all this information together for a possible solution.</p> | <p>The WebTr@iner “Bus Systems” is a training program which provides an effective method of obtaining information using characteristics and features of field bus systems ASI, Profibus-DP, Interbus-S and CAN. To improve the student’s knowledge and experience interactive practical exercises may be carried out using</p> | <p>virtual reality methods.</p> <p>-</p> |
|---|--|--|

Part number
R 927 001 000 EN



Pneumatics
气动

WebTr@iner 总线系统

WebTr@iner BUS Systems

内容

ASI
Profibus-DP
Interbus-S
CAN, 带ASI 的
Profibus-DP

结构

简述
学习目标
物理模型
通讯模式

故障诊断
特性特征
试验与测试

订货号:

R 927 001 000

Contents

ASI•
Profibus-DP •
Interbus-S •
CAN and Profibus-DP with
ASI•

Structure

Introduction•
Learning Objectives•
Physical Modelling•
Communication Models •
Diagnosis• Characteristics•

Experimental Work •
Testing •

Part number

R 927 001 000 EN

总线技术 | **BUS-technology**
软件 • Software

| | | |
|------------------|-----------------|---|
| Pneumatics 气动 | CD-ROM 总线多媒体 |  |
| | CD-ROM BUSmedia | |

WebTr@iner-多媒体总线系统

适用于:

- ASI •
- Profibus DP •
- Interbus S •
- CAN •
- 带ASI的Profibus DP

系统配置要求:

- Microsoft Windows 98/NT 4.0SP4/ME/2000/XP
- Pentium 200 MHz 或更高
- 64 MB RAM (XP需128 MB RAM)
- 显示器分辨率 1024x768, 65536 色
- 16x CD-ROM 光驱
- Microsoft Internet Explorer 5.x
- 或Microsoft Internet Explorer (用于 XP)
- Macromedia Flash Player 5
(在供货范围之内)

订货号
R 961 001 733

Media from WebTr@iner
 Bus Systems
 For:
 ASI •
 Profibus DP •
 Interbus S •
 CAN •
 Profibus DP with ASI •

System Requirements
 Microsoft Windows 98/NT 4.0 •SP4/ME/2000/XP
 Pentium 200 MHz or more •
 64 MB RAM (128 MB RAM • necessary for XP)
 Screen resolution 1024x768, • 65536 colors
 16x CD-ROM drive •
 Microsoft Internet Explorer 5.x •
 Microsoft Internet Explorer for XP •
 Macromedia Flash Player 5 (included in delivery)

Part number
R 961 001 733 EN

培训工具 • Training tools

Pneumatics
气动

2009 传动技术 DVD 系列

DVD series-Technology in Motion 2009



24个精心制作的高品质动画DVD为不同的应用技术领域提供了真实生动的传动方案。这套多媒体教学光盘包含录像、公允表达与基于技术的销售方案。它不仅完美地适用于大型活动与演讲场合,也可作为教学培训的辅助工具。

- | | |
|--------------|--------------------------|
| 1 公司录像 | 15 FIVA阀 |
| 2 力士乐液压50年 | 16 HRB卡车 |
| 3 2006 工业宣传片 | 17 HRB铲车 |
| 4 传动技术的发展 | 18 传动与控制学院 |
| 5 印刷机械 | 19 食品与包装 |
| 6 造纸机械 | 20 动态托举补偿 |
| 7 收割机械 | 21 注塑机 |
| 8 锯木机械 | 22 E2C - Easy to Combine |
| 9 伐木机械 | 23 风能 |
| 10 挤压机械 | 24 太阳能 |
| 11 粉末金属压机械 | |
| 12 连铸机械 | |
| 13 比例阀 | |
| 14 伺服阀 | |

订货号: R 961 005 175




24 sophisticated high quality animations illustrate actual and interesting drive solutions out of various application areas. This movie series contains image videos

- | | |
|-------------------------------|-------------------------------|
| 1 Corporate Video | 16 HRB Truck |
| 2 50 Years Rexroth Hydraulics | 17 HRB Forklifter |
| 3 Trailer Industrial 2006 | 18 Drive & Control Academy |
| 4 Evolution in Motion | 19 Food and Packaging |
| 5 Printing Machine | 20 Active Heave Compensation |
| 6 Papermill | 21 Injection Moulding Machine |
| 7 Harvester | 22 E2C - Easy to combine |
| 8 Sawmill | 23 Wind Energy |
| 9 Woodworking | 24 Solar Energy |
| 10 Extrusion Press | |
| 11 Powder Metal Press | |
| 12 Continuous Casting | |
| 13 Proportional Valve | |
| 14 Servo Valve | |
| 15 FIVA Valve | |

Part number

R 961 005 175 EN

培训工具 • Training tools

| | | |
|--|----------------------|----------------|
|  | HY/PN 符号模板 | R900 018 486 |
| | HY/PN Symbol stencil | R900 018 486EN |
|  | HY 幻灯片 | - |
| | HY-Slide rule | R900 018 413EN |
|  | PN 幻灯片 | R961 000 803 |
| | PN-Slide rule | R961 000 803EN |

订货号索引 • Key of numbers

| 订货号 | 名称 | 页码 |
|---------------|---|----|
| 1070 083 001 | WebTr@iner 液压基础 | 6 |
| | WebTr@iner Hydraulics Basics | |
| 1070 083 007 | WebTr@iner 气动基础 | 18 |
| | WebTr@iner Pneumatics Basics | |
| - | HY 幻灯片 | 29 |
| R 900 018 483 | HY-Slide rule | |
| - | HY/PN 符号模板 | 29 |
| R 900 018 486 | HY/PN Symbol stencil | |
| - | 流体技术基础及元件 第一册 | 13 |
| R 900 018 614 | Basic Principles and Components of Fluid Technology | |
| R 900 071 655 | 电气液压操作手册-教师手册 | 16 |
| | Manuals Electrohydraulics-Trainer's manual | |
| R 900 071 656 | 电气液压操作手册-学生手册 | 16 |
| | Manuals Electrohydraulics-Trainee's manual | |
| R 900 215 919 | 液压基本原理操作手册-学生手册 | 16 |
| | Manuals Hydraulics Basic principles-Trainee's manual | |
| R 900 215 921 | 液压基本原理操作手册-教师手册 | 16 |
| | Manuals Hydraulics Basic principles-Trainer's manual | |
| R 900 216 009 | 回转传动装置操作手册-教师手册 | 17 |
| | Manuals Rotary drive- Trainer's manual | |
| | 回转传动装置操作手册-学生手册 | 17 |
| | Manuals Rotary drive- Trainee's manual | |
| R 900 617 739 | 比例液压操作手册（数字控制）-教师手册 | 17 |
| | Manuals Proportion Hydraulics (digital control)- Trainer's manual | |
| R 900 617 740 | 比例液压操作手册（数字控制）-学生手册 | 17 |
| | Manuals Proportion Hydraulics (digital control)- Trainee's manual | |
| R 900 701 018 | CD-ROM PNgraphics | 21 |
| R 900 783 082 | 气压传动操作手册-教师手册 | 22 |
| | Manuals Pneumatics- Trainer's manual | |
| R 900 783 083 | 电气气动/PLC/PN控制操作手册-教师手册 | 22 |
| | Manuals Electropneumatics/PLC/PN Controls-Trainer's manual | |
| R 900 849 854 | 比例液压操作手册（模拟控制）-学生手册 | 17 |
| | Manuals Propotional Hydraulics(analog control)- Trainee's manual | |
| R 900 849 857 | 比例液压操作手册（模拟控制）-教师手册 | 17 |
| | Manuals Propotional Hydraulics(analog control)- Trainer's manual | |

| | | |
|---------------|--|----|
| R 900 854 114 | 用EXCEL进行流体静力学计算 Hydrostatic calculations with Excel | 12 |
| R 900 884 050 | 液压培训教程CBT: 第一册+ CD-ROM Hydraulics Trainer CBT:Volume 1+CD-ROM | 14 |
| R 900 884 371 | 液压培训教程CBT CD-ROM 4.0版 The Hydraulic Trainer CBT CD-ROM Version 4.0 | 10 |
| R 927 001 000 | WebTr@iner 总线系统 WebTr@iner Bus Systems | 26 |
| R 927 001 005 | WebTr@iner 连续控制液压 WebTr@iner Continuous Control Hydraulics | 8 |
| R 927 001 083 | 机电一体化理论与应用 Mechatronics. Theory and Applications | 25 |
| R 927 001 115 | 电气气动/PLC/PN控制操作手册-学生手册 Manuals Electropneumatics/PLC/PN Controls-Trainee's manual | 22 |
| R 927 001 116 | 气压传动操作手册-教师手册 Manuals Pneumatics-Trainee's manual | 22 |
| R 927 001 146 | 气动技术理论与应用 Pneumatics. Theory and Applications | 21 |
| R 961 000 784 | 液压技术理论与应用 Hydraulics. Theory and Applications | 14 |
| R 961 000 791 | 行走机械液压教程 Hydraulics in Mobile Equipment | 15 |
| R 961 000 799 | CD-ROM HY1graphics | 13 |
| R 961 000 819 | WebTr@iner 电气液压 WebTr@iner Electrohydraulics | 7 |
| R 961 001 656 | WebTr@iner 气动系统 WebTr@iner Pneumatics Systems | 19 |
| R 961 001 728 | CD-ROM HYmedia/1 | 9 |
| R 961 001 729 | CD-ROM HYmedia/2 | 9 |
| R 961 001 730 | CD-ROM HYmedia/3 | 9 |
| R 961 001 731 | CD-ROM PNmedia/1 | 20 |
| R 961 001 732 | CD-ROM PNmedia/2 | 20 |
| R 961 001 733 | CD-ROM BUSmedia | 20 |
| R961 001 990 | 气动能量转换 DVD DVD Pneumatics, Energy Conversion | 24 |
| R961 001 991 | 气动阀 DVD DVD Pneumatics, Valves | 24 |
| R961 001 992 | 气动控制类型 DVD | 24 |

| | | |
|--------------|--------------------------------------|----|
| | DVD Pneumatics, Types of Control | |
| R961 005 099 | CD-ROM HYVOS6.4-标准版 | 11 |
| | CD-ROM HYVOS6.4-Standard version | |
| R961 005 100 | CD-ROM HYVOS6.4-学校版 | 11 |
| | CD-ROM HYVOS6.4-Schools version | |
| R961 005 175 | 2009传动技术 DVD系列 | 29 |
| | DVD series-Technology in Motion 2009 | |

寄件人:

Bosch Rexroth AG
Drive & Control Academy
Bahnhofplatz 2
97070 Würzburg - Germany
Phone +49 (0) 9352 18-1041
Fax +49 (0) 9352 18-6882
knowledge@boschrexroth.de
www.boschrexroth.com/academy

日期:

订货单

请填写以下表格后，将其传真到以下号码

| | | | |
|-----|-------|----|-------|
| 订货号 | _____ | 名称 | _____ |
| 订货号 | _____ | 名称 | _____ |
| 订货号 | _____ | 名称 | _____ |
| 订货号 | _____ | 名称 | _____ |
| 订货号 | _____ | 名称 | _____ |

寄送地址

姓 _____ 名 _____

电话 _____ 传真 _____

公司 _____

街道/邮箱 _____

邮政编码, 城市, 国家

城市, 日期 _____ 签名/盖章 _____

Sender: _____

Bosch Rexroth AG
Drive & Control Academy
Bahnhofplatz 2
97070 Würzburg - Germany
Phone +49 (0) 9352 18-1041
Fax +49 (0) 9352 18-6882
knowledge@boschrexroth.de
www.boschrexroth.com/academy

Date: _____

Purchase order form

Please complete the order form and fax it to number given above.

Part number _____ Designationes _____

Part number _____ Designationes _____

Part number _____ Designationes _____

Part number _____ Designationes _____

Part number _____ Designationes _____

Ship-to-address

Surname _____ First name _____

Phone _____ Fax _____

Company _____

Road/p.o. box _____

Postal code, place, country _____

Place/date _____

Signature/firm stamp _____

Bosch Rexroth AG
Drive & Control Academy
Bahnhofplatz 2
97070 Würzburg - Germany
Phone +49 (0) 9352 18-1041
Fax +49 (0) 9352 18-6882
knowledge@boschrexroth.de
www.boschrexroth.com/academy

Printed in Germany
DCA-DE_EN_ES_000009
Ersetzt: RD 00873/02.05
Replaces: RD 00873/02.05
Sustituye a: RD 00873/02.05