





EXTENSION DEVICE SET FOR WORKSTATION DS3/WS200 "PNEUMATICS – ELECTRICAL OPERATION (ACCORDING TO BIBB, EXERCISE 1-16)*", IN L-BOXX



Material number	R901386902
Material short text	GERAETE-SET TS-PS 401-1X-K

The extension device set "Pneumatics – Electrical operation (BIBB, exercise 1-16)*" can be used to achieve the learning targets and learning content of basic and advanced training in technical professions in terms of the BIBB on the basics of electro-pneumatics based on real industrial components. The device set is tailored to the exercise book "Pneumatics – Electrical operation (according to BIBB, exercise 1-16)*" which deals with BIBB exercises 1-16. It only contains the components necessary as an addition to the device set "Pneumatics – Manual/ pneumatic operation". The exercises with the listed components can be carried out at workstation DS3 and at workstation WS200. All components are delivered in a stackable plastic case (L-Boxx).

Item	Component	Mat.-no.	Quantity	Image
1	Double-acting cylinder, d = 25 mm, h = 100 mm	1827003372	1	
2	Throttle/non-return valve G1/8	1827003379	1	
3	3/2 directional control valve, electrically operated, M5, with spring return	1827003412	1	
4	5/2 directional control valve, electrically operated, G1/8, with spring return	R901385293	3	
5	5/2 directional control valve, electrically operated, G1/8, impulse	R901385294	3	

* Exercises and matching device sets based on the recommendations according to BIBB from 2010

Pneumatics – Electrical operation (according to BIBB, exercise 1-16)*

The contents and targets of this learning topic correspond to the specifications of the Federal Institute for Vocational Education and Training (BIBB)* and offer practice-related training in the different training levels of pneumatics. With successful completion of the practical exercises, you acquire knowledge of control technology, electro-pneumatics as well as the design language for sequence control "GRAFCET".

Exercise books

The exercise books are tailored to the device sets. The described exercises and tasks provide basic information and methods. The setup is structured in a uniform manner and provides the step-by-step description for completion of the individual exercises.

Two versions

- ▶ Exercises with solutions: more far-reaching trainer information and contents such as measured values, calculation results, etc.
- ▶ Exercises: independent completion of calculations and measured value tables, etc.

Learning content

With the help of logically structured, practice-related exercises, the trainee should:

- ▶ Understand laws of physics applicable in pneumatics, such as pressure difference and compressibility
- ▶ Get to know and observe legal regulations and safety provisions
- ▶ Get to know and apply the most important symbols of pneumatics
- ▶ Understand the functions of basic pneumatic circuits
- ▶ Identify the behavior of pneumatic components in different operating situations
- ▶ Determine characteristic values

The following exercises are included

No.	Exercise
01	Pilot control with single-acting cylinder
02	Pilot control with double-acting cylinder
03	Holding element control with double-acting cylinder
04	Basic circuit with AND operation
05	Basic circuit with OR operation
06	Basic circuit with electric load-holding
07	Path-dependent control with double-acting cylinder
08	Path-dependent control with two double-acting cylinders
09	Time-dependent control, pickup-delayed
10	Time-dependent control, release-delayed
11	Pressure and path-dependent control
12	Sequence control with two double-acting cylinders, intuitive
13	Sequence control with two double-acting cylinders, step chain
14	Sequence control with three double-acting cylinders, impulse-controlled
15	Sequence control with three double-acting cylinders, spring-retained
16	Pilot control with boundary condition

* Exercises and matching device sets based on the recommendations according to BIBB from 2010

EXERCISE BOOKS

"PNEUMATICS – ELECTRICAL OPERATION (ACCORDING TO BIBB, EXERCISE 1-16)*"



◀ Exercise book example

	Language	Material number	Material short text
Exercises with solutions (trainer´s manual)	DE	R901407757	UEBUNGSBUCH TW-PN-LH-2/X 202DE
Exercises with solutions (trainer´s manual)	EN	R901408015	EXERCISE BOOK TW-PN-LH-2/X 202EN
Exercises with solutions (trainer´s manual)	ES	R901408016	LIBRO DE EJERCICIOS TW-PN-LH-2/X 202ES
Exercises with solutions (trainer´s manual)	FR	R901428298	LIVRE D'EXERCICE TW-PN-LH-2/X 202FR
Exercises (trainee´s manual)	DE	R901407759	UEBUNGSBUCH TW-PN-SH-2/X 202DE
Exercises (trainee´s manual)	EN	R901408018	EXERCISE BOOK TW-PN-SH-2/X 202EN
Exercises (trainee´s manual)	ES	R901408020	LIBRO DE EJERCICIOS TW-PN-SH-2/X 202ES
Exercises (trainee´s manual)	FR	R901428300	LIVRE D'EXERCICE TW-PN-SH-2/X 202FR